Full wwPDB EM Validation Report ⓘ

Mar 18, 2024 – 05:37 pm GMT

PDB ID	:	8QHD
EMDB ID	:	EMD-18408
Title	:	Hantaan virus polymerase in hexameric state
Authors	:	Durieux Trouilleton, Q.; Arragain, B.; Malet, H.
Deposited on	:	2023-09-07
Resolution	:	3.60 Å(reported)
Based on initial model	:	8C4S

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

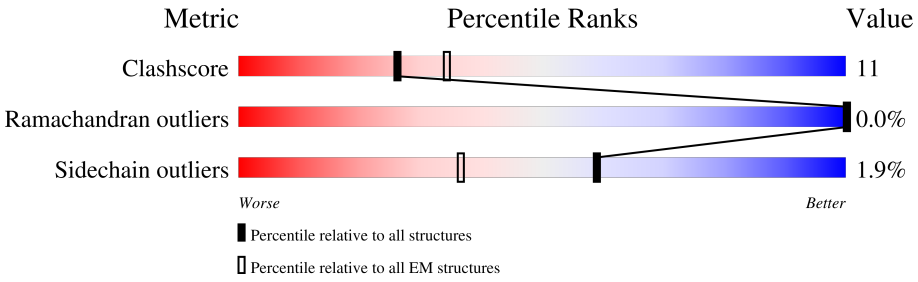
EMDB validation analysis	:	0.0.1.dev92
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	2173	21% 61% 24% · 14%
1	B	2173	19% 61% 24% · 14%
1	C	2173	13% 68% 23% · 8%
1	D	2173	62% 74% 20% 7%
1	E	2173	15% 68% 23% · 8%
1	F	2173	63% 74% 20% 7%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 95348 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called RNA-directed RNA polymerase L.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	D	2030	Total	C	N	O	S	0	0
			16400	10555	2764	2994	87		
1	B	1873	Total	C	N	O	S	0	0
			15128	9747	2547	2756	78		
1	C	1999	Total	C	N	O	S	0	0
			16146	10400	2714	2945	87		
1	F	2030	Total	C	N	O	S	0	0
			16400	10555	2764	2994	87		
1	A	1873	Total	C	N	O	S	0	0
			15128	9747	2547	2756	78		
1	E	1999	Total	C	N	O	S	0	0
			16146	10400	2714	2945	87		

There are 132 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	-21	MET	-	initiating methionine	UNP P23456
D	-20	GLY	-	expression tag	UNP P23456
D	-19	HIS	-	expression tag	UNP P23456
D	-18	HIS	-	expression tag	UNP P23456
D	-17	HIS	-	expression tag	UNP P23456
D	-16	HIS	-	expression tag	UNP P23456
D	-15	HIS	-	expression tag	UNP P23456
D	-14	HIS	-	expression tag	UNP P23456
D	-13	ASP	-	expression tag	UNP P23456
D	-12	TYR	-	expression tag	UNP P23456
D	-11	ASP	-	expression tag	UNP P23456
D	-10	ILE	-	expression tag	UNP P23456
D	-9	PRO	-	expression tag	UNP P23456
D	-8	THR	-	expression tag	UNP P23456
D	-7	THR	-	expression tag	UNP P23456
D	-6	GLU	-	expression tag	UNP P23456
D	-5	ASN	-	expression tag	UNP P23456
D	-4	LEU	-	expression tag	UNP P23456

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-3	TYR	-	expression tag	UNP P23456
D	-2	PHE	-	expression tag	UNP P23456
D	-1	GLN	-	expression tag	UNP P23456
D	0	GLY	-	expression tag	UNP P23456
B	-21	MET	-	initiating methionine	UNP P23456
B	-20	GLY	-	expression tag	UNP P23456
B	-19	HIS	-	expression tag	UNP P23456
B	-18	HIS	-	expression tag	UNP P23456
B	-17	HIS	-	expression tag	UNP P23456
B	-16	HIS	-	expression tag	UNP P23456
B	-15	HIS	-	expression tag	UNP P23456
B	-14	HIS	-	expression tag	UNP P23456
B	-13	ASP	-	expression tag	UNP P23456
B	-12	TYR	-	expression tag	UNP P23456
B	-11	ASP	-	expression tag	UNP P23456
B	-10	ILE	-	expression tag	UNP P23456
B	-9	PRO	-	expression tag	UNP P23456
B	-8	THR	-	expression tag	UNP P23456
B	-7	THR	-	expression tag	UNP P23456
B	-6	GLU	-	expression tag	UNP P23456
B	-5	ASN	-	expression tag	UNP P23456
B	-4	LEU	-	expression tag	UNP P23456
B	-3	TYR	-	expression tag	UNP P23456
B	-2	PHE	-	expression tag	UNP P23456
B	-1	GLN	-	expression tag	UNP P23456
B	0	GLY	-	expression tag	UNP P23456
C	-21	MET	-	initiating methionine	UNP P23456
C	-20	GLY	-	expression tag	UNP P23456
C	-19	HIS	-	expression tag	UNP P23456
C	-18	HIS	-	expression tag	UNP P23456
C	-17	HIS	-	expression tag	UNP P23456
C	-16	HIS	-	expression tag	UNP P23456
C	-15	HIS	-	expression tag	UNP P23456
C	-14	HIS	-	expression tag	UNP P23456
C	-13	ASP	-	expression tag	UNP P23456
C	-12	TYR	-	expression tag	UNP P23456
C	-11	ASP	-	expression tag	UNP P23456
C	-10	ILE	-	expression tag	UNP P23456
C	-9	PRO	-	expression tag	UNP P23456
C	-8	THR	-	expression tag	UNP P23456
C	-7	THR	-	expression tag	UNP P23456
C	-6	GLU	-	expression tag	UNP P23456

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Chain	Residue	Modelled	Actual	Comment	Reference
C	-5	ASN	-	expression tag	UNP P23456
C	-4	LEU	-	expression tag	UNP P23456
C	-3	TYR	-	expression tag	UNP P23456
C	-2	PHE	-	expression tag	UNP P23456
C	-1	GLN	-	expression tag	UNP P23456
C	0	GLY	-	expression tag	UNP P23456
F	-21	MET	-	initiating methionine	UNP P23456
F	-20	GLY	-	expression tag	UNP P23456
F	-19	HIS	-	expression tag	UNP P23456
F	-18	HIS	-	expression tag	UNP P23456
F	-17	HIS	-	expression tag	UNP P23456
F	-16	HIS	-	expression tag	UNP P23456
F	-15	HIS	-	expression tag	UNP P23456
F	-14	HIS	-	expression tag	UNP P23456
F	-13	ASP	-	expression tag	UNP P23456
F	-12	TYR	-	expression tag	UNP P23456
F	-11	ASP	-	expression tag	UNP P23456
F	-10	ILE	-	expression tag	UNP P23456
F	-9	PRO	-	expression tag	UNP P23456
F	-8	THR	-	expression tag	UNP P23456
F	-7	THR	-	expression tag	UNP P23456
F	-6	GLU	-	expression tag	UNP P23456
F	-5	ASN	-	expression tag	UNP P23456
F	-4	LEU	-	expression tag	UNP P23456
F	-3	TYR	-	expression tag	UNP P23456
F	-2	PHE	-	expression tag	UNP P23456
F	-1	GLN	-	expression tag	UNP P23456
F	0	GLY	-	expression tag	UNP P23456
A	-21	MET	-	initiating methionine	UNP P23456
A	-20	GLY	-	expression tag	UNP P23456
A	-19	HIS	-	expression tag	UNP P23456
A	-18	HIS	-	expression tag	UNP P23456
A	-17	HIS	-	expression tag	UNP P23456
A	-16	HIS	-	expression tag	UNP P23456
A	-15	HIS	-	expression tag	UNP P23456
A	-14	HIS	-	expression tag	UNP P23456
A	-13	ASP	-	expression tag	UNP P23456
A	-12	TYR	-	expression tag	UNP P23456
A	-11	ASP	-	expression tag	UNP P23456
A	-10	ILE	-	expression tag	UNP P23456
A	-9	PRO	-	expression tag	UNP P23456
A	-8	THR	-	expression tag	UNP P23456

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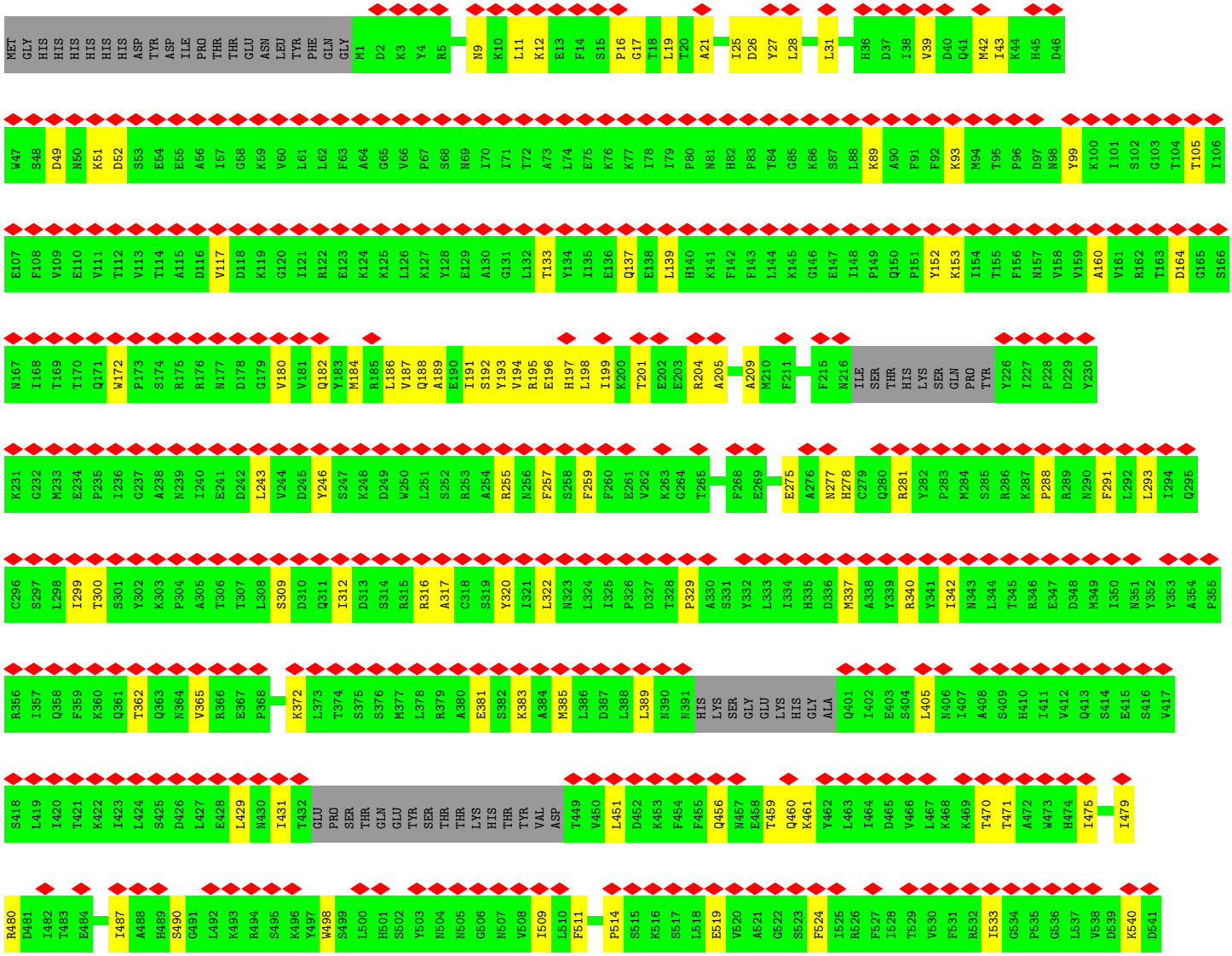
Chain	Residue	Modelled	Actual	Comment	Reference
A	-7	THR	-	expression tag	UNP P23456
A	-6	GLU	-	expression tag	UNP P23456
A	-5	ASN	-	expression tag	UNP P23456
A	-4	LEU	-	expression tag	UNP P23456
A	-3	TYR	-	expression tag	UNP P23456
A	-2	PHE	-	expression tag	UNP P23456
A	-1	GLN	-	expression tag	UNP P23456
A	0	GLY	-	expression tag	UNP P23456
E	-21	MET	-	initiating methionine	UNP P23456
E	-20	GLY	-	expression tag	UNP P23456
E	-19	HIS	-	expression tag	UNP P23456
E	-18	HIS	-	expression tag	UNP P23456
E	-17	HIS	-	expression tag	UNP P23456
E	-16	HIS	-	expression tag	UNP P23456
E	-15	HIS	-	expression tag	UNP P23456
E	-14	HIS	-	expression tag	UNP P23456
E	-13	ASP	-	expression tag	UNP P23456
E	-12	TYR	-	expression tag	UNP P23456
E	-11	ASP	-	expression tag	UNP P23456
E	-10	ILE	-	expression tag	UNP P23456
E	-9	PRO	-	expression tag	UNP P23456
E	-8	THR	-	expression tag	UNP P23456
E	-7	THR	-	expression tag	UNP P23456
E	-6	GLU	-	expression tag	UNP P23456
E	-5	ASN	-	expression tag	UNP P23456
E	-4	LEU	-	expression tag	UNP P23456
E	-3	TYR	-	expression tag	UNP P23456
E	-2	PHE	-	expression tag	UNP P23456
E	-1	GLN	-	expression tag	UNP P23456
E	0	GLY	-	expression tag	UNP P23456

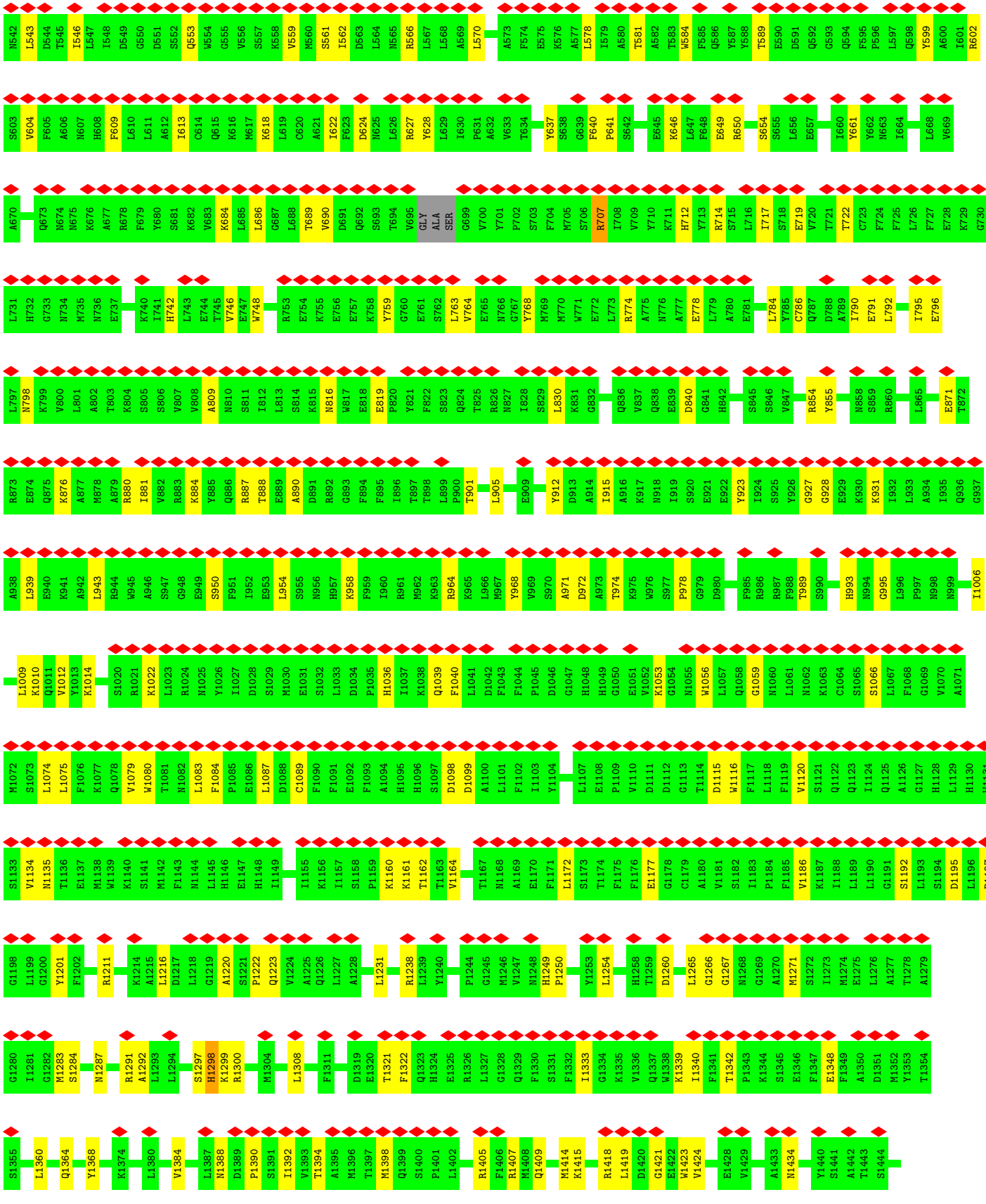
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: RNA-directed RNA polymerase L

Chain D:

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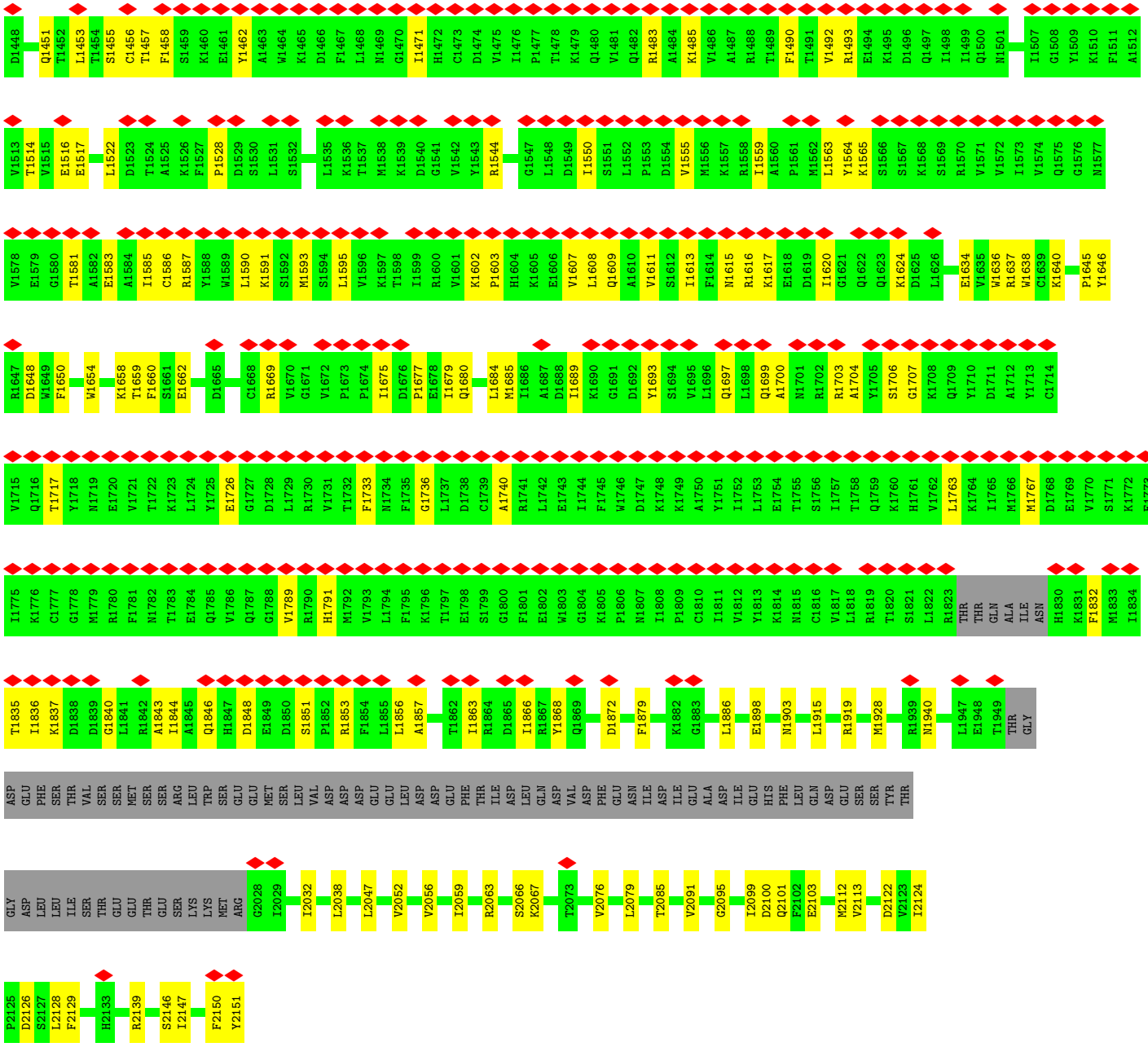
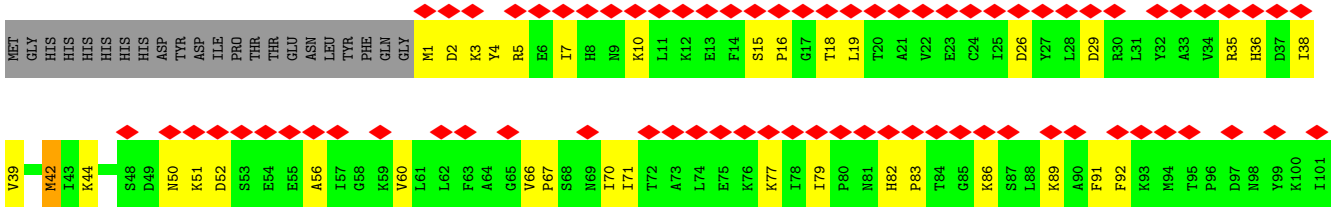
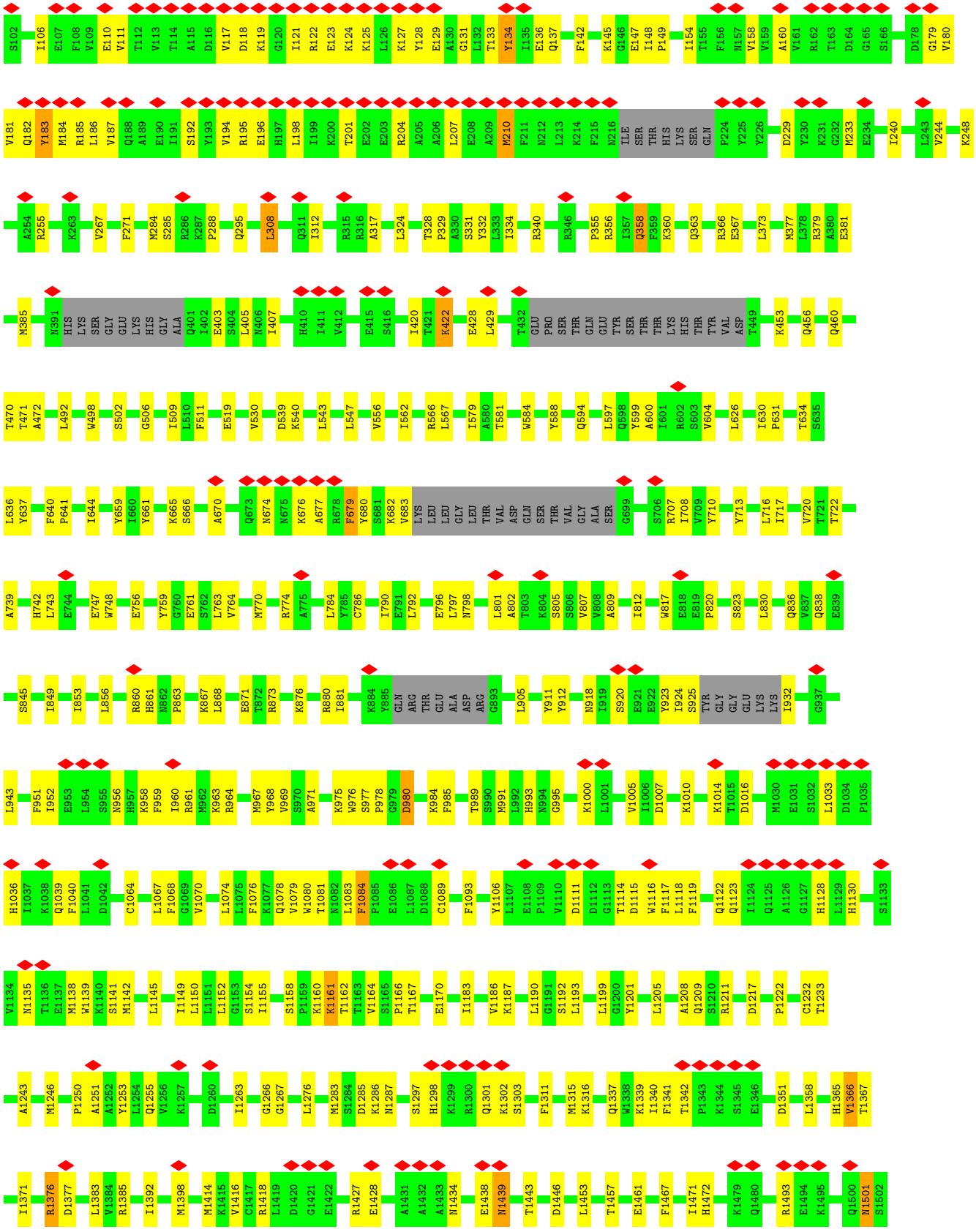
S603 V604 F605 A606 N607 H608 F609 L610 L611 A612 I613 C614 Q615 K616 M617 K618 L619 C620 A621 I622 F623 D624 N625 L626 R627 Y628 L629 I630 P631 A632 V633 T634 Y637 S638 G639 F640 P641 S642 E645 K646 L647 F648 E649 R650 S654 S655 L656 E657 I660 Y661 Y662 W663 I664 L668 V669
A670 Q673 N674 N675 K676 A677 R678 F679 Y680 S681 K682 V683 K684 L685 L686 G687 L688 T689 V690 D691 Q692 S693 T694 V695 GLY ALA SER G699 V700 Y701 P702 S703 F704 M705 S706 R707 I708 V709 Y710 K711 H712 Y713 R714 S715 L716 I717 S718 E719 V720 T721 T722 C723 F724 F725 L726 F727 E728 K729 G730
L731 H732 G733 N734 M735 N736 E737 K740 I741 H742 L743 E744 T745 V746 E747 W748 R753 E754 K755 E756 E757 K758 Y759 G760 E761 S762 L763 V764 E765 N766 G767 Y768 M769 M770 W771 E772 L773 R774 A775 N776 A777 E778 L779 A780 E781 L784 Y785 C786 Q787 D788 A789 I790 E791 L792 I795 E796
L797 N798 K799 V800 L801 A802 T803 K804 S805 S806 V807 V808 A809 N810 S811 I812 L813 S814 K815 N816 W817 E818 E819 P820 Y821 F822 S823 Q824 T825 R826 N827 I828 S829 L830 K831 G832 Q836 V837 Q838 E839 D840 G841 H842 S845 S846 V847 R854 Y855 N858 S859 R860 L865 E871 T872
R873 E874 Q875 K876 A877 M878 A879 R880 I881 V882 R883 K884 Y885 Q886 R887 T888 E889 A890 D891 R892 G893 F894 F895 I896 T897 T898 L899 P900 T901 L905 E909 Y912 D913 A914 I915 A916 K917 N918 I919 S920 E921 E922 Y923 I924 S925 Y926 G927 G928 E929 K930 K931 I932 L933 A934 I935 Q936 G937
A938 L939 E940 K941 A942 L943 R944 W945 A946 S947 G948 E949 S950 F951 I952 E953 L954 S955 N956 H957 K958 F959 I960 R961 M962 K963 R964 K965 L966 M967 Y968 V969 S970 A971 D972 A973 T974 K975 W976 S977 P978 G979 D980 F985 R986 R987 F988 T989 S990 H993 N994 G995 L996 P997 N998 N999 I1006
L1009 K1010 Q1011 V1012 Y1013 K1014 S1020 R1021 K1022 L1023 R1024 N1025 Y1026 I1027 D1028 S1029 M1030 E1031 S1032 L1033 D1034 P1035 H1036 I1037 K1038 Q1039 F1040 L1041 D1042 F1043 F1044 P1045 D1046 G1047 H1048 H1049 G1050 E1051 V1052 K1053 G1054 N1055 W1056 L1057 Q1058 G1059 N1060 L1061 N1062 K1063 C1064 S1065 S1066 L1067 F1068 G1069 V1070 A1071
M1072 S1073 L1074 L1075 F1076 K1077 Q1078 V1079 W1080 T1081 N1082 L1083 F1084 P1085 E1086 L1087 D1088 C1089 F1090 F1091 E1092 F1093 A1094 H1095 H1096 S1097 D1098 D1099 A1100 L1101 F1102 I1103 Y1104 L1107 E1108 P1109 V1110 D1111 D1112 G1113 T1114 D1115 W1116 F1117 L1118 F1119 V1120 S1121 Q1122 Q1123 I1124 Q1125 A1126 G1127 H1128 L1129 H1130 W1131 F1132
S1133 V1134 N1135 T1136 E1137 M1138 W1139 K1140 S1141 M1142 F1143 N1144 L1145 H1146 E1147 H1148 I1149 I1155 K1156 I1157 S1158 P1159 K1160 K1161 T1162 T1163 V1164 T1167 N1168 A1169 E1170 F1171 L1172 S1173 T1174 F1175 F1176 E1177 G1178 C1179 A1180 V1181 S1182 I1183 P1184 F1185 V1186 K1187 I1188 L1189 L1190 G1191 S1192 L1193 S1194 D1195 L1196 P1197
G1198 L1199 G1200 Y1201 F1202 R1211 K1214 A1215 L1216 D1217 L1218 G1219 A1220 S1221 P1222 Q1223 V1224 A1225 Q1226 L1227 A1228 L1231 R1238 L1239 Y1240 P1244 G1245 M1246 V1247 N1248 H1249 P1250 Y1253 L1254 H1258 T1259 D1260 L1265 G1266 G1267 N1268 G1269 A1270 M1271 S1272 I1273 M1274 E1275 L1276 A1277 T1278 A1279
G1280 I1281 G1282 M1283 S1284 N1287 R1291 A1292 L1293 L1294 S1297 H1298 K1299 R1300 M1304 L1308 F1311 D1319 E1320 T1321 F1322 Q1323 H1324 E1325 R1326 L1327 G1328 Q1329 F1330 S1331 F1332 I1333 G1334 K1335 V1336 Q1337 W1338 K1339 I1340 F1341 T1342 P1343 K1344 S1345 E1346 F1347 E1348 F1349 A1350 D1351 M1352 Y1353 T1354
S1355 L1360 Q1364 Y1368 K1374 L1380 V1384 L1387 N1388 D1389 P1390 S1391 I1392 V1393 T1394 A1395 M1396 T1397 M1398 Q1399 S1400 P1401 L1402 R1405 F1406 R1407 M1408 Q1409 M1414 K1415 R1418 L1419 D1420 G1421 E1422 W1423 V1424 E1428 V1429 A1433 N1434 Y1440 S1441 A1442 T1443 S1444



• Molecule 1: RNA-directed RNA polymerase L

Chain B:

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V181 Q182 Y183 M184 R185 L186 V187 Q188 A189 E190 I191 S192 Y193 V194 R195 E196 H197 L198 I199 K200 T201 E202 E203 R204 A205 A206 L207 E208 A209 M210 F211 N212 L213 K214 F215 N216 ILE SER THR HIS LYS SER GLN F224 Y225 Y226 D229 Y230 K231 G232 M233 E234 I240 L243 V244 K248
A254 R255 K263 V267 F271 M284 S285 R286 K287 P288 Q295 L308 Q311 I312 R315 R316 A317 L324 T328 P329 A330 S331 Y332 L333 I334 R340 R346 P355 R356 I357 Q358 F359 K360 Q363 R366 E367 L373 M377 L378 R379 A380 E381
M385 N391 HIS LYS SER GLY GLU LYS HIS GLY ALA Q401 I402 E403 S404 L405 N406 I407 H410 I411 V412 E415 S416 I420 T421 K422 E428 L429 T432 GLU PRO SER THR GLN GLU TYR SER THR THR LYS HIS THR TYR VAL ASP T449 K453 Q456 Q460
T470 T471 A472 L492 W498 S502 G506 I509 L510 F511 E519 V530 D539 K540 L543 L547 V556 I562 R566 L567 I579 A580 T581 W584 Y588 Q594 L597 Q598 Y599 A600 I601 R602 S603 V604 L626 I630 P631 T634 S635
L636 Y637 F640 P641 I644 Y659 I660 Y661 K665 S666 A670 Q673 N674 N675 K676 A677 R678 F679 Y680 S681 K682 V683 LYS LEU LEU GLY LEU THR VAL ASP GLN SER THR VAL GLY ALA SER G699 S706 R707 I708 V709 Y710 Y713 L716 I717 V720 T721 T722
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S845 I849 I853 L856 R860 H861 N862 P863 K867 L868 E871 T872 R873 K876 R880 I881 K884 Y885 GLN ARG THR GLU ALA ASP ARG G893 L905 Y911 Y912 N918 I919 S920 E921 E922 Y923 I924 S925 TYR GLY GLY GLU LYS LYS I932 G937
L943 F951 I952 E953 L954 S955 N956 H957 K958 F959 I960 R961 N962 K963 R964 M967 Y968 V969 S970 A971 K975 W976 S977 P978 G979 D980 K984 F985 T989 S990 M991 L992 H993 N994 G995 K1000 L1001 V1005 I1006 D1007 K1010 K1014 T1015 D1016 M1030 E1031 S1032 L1033 D1034 P1035
H1036 I1037 K1038 Q1039 F1040 L1041 D1042 C1064 L1067 F1068 G1069 V1070 L1074 L1075 F1076 K1077 Q1078 V1079 W1080 T1081 N1082 L1083 F1084 P1085 E1086 L1087 D1088 C1089 F1093 Y1106 L1107 E1108 P1109 V1110 D1111 D1112 G1113 T1114 D1115 W1116 F1117 L1118 F1119 Q1122 Q1123 I1124 Q1125 A1126 G1127 H1128 L1129 H1130 S1133
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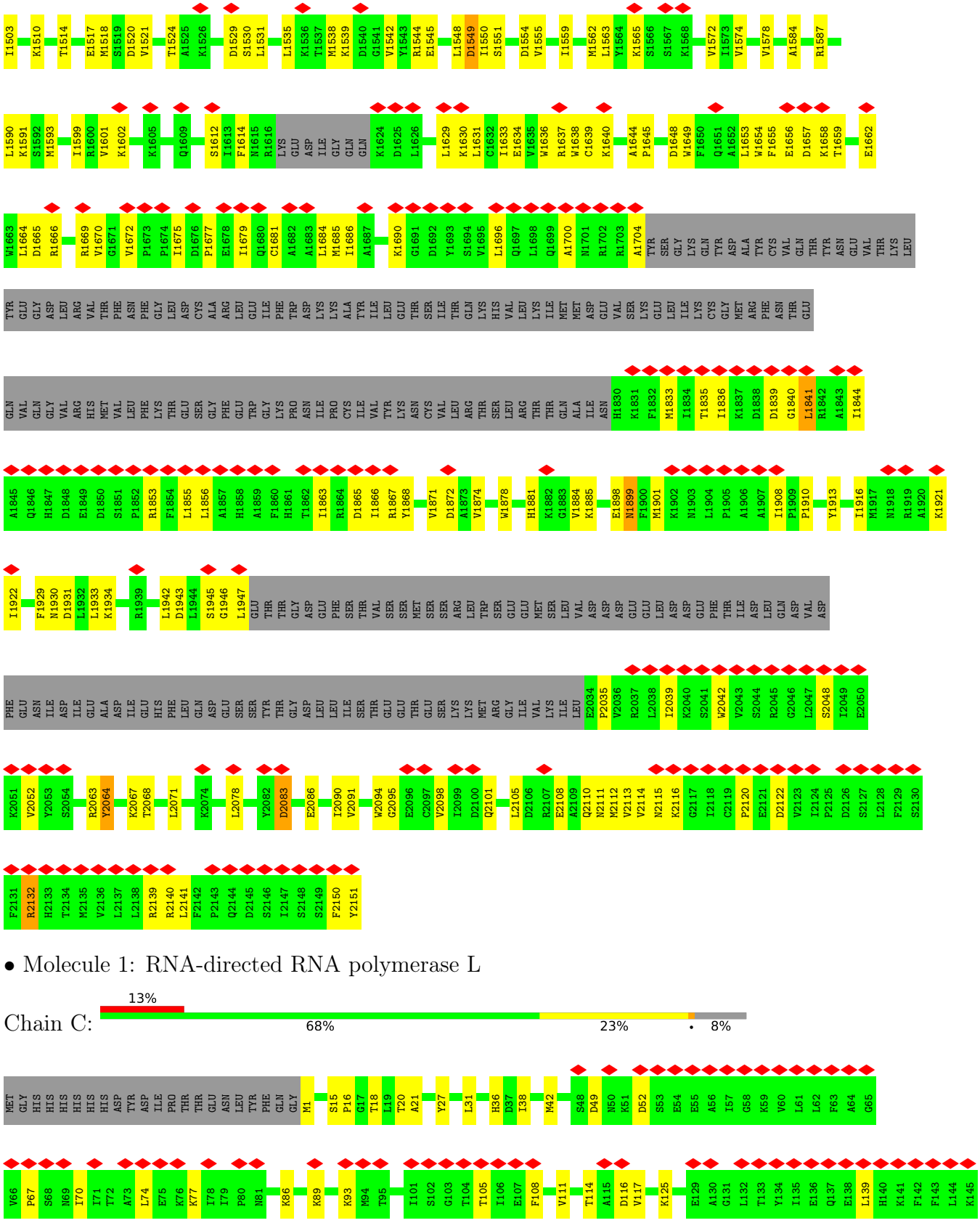

• Molecule 1: RNA-directed RNA polymerase L

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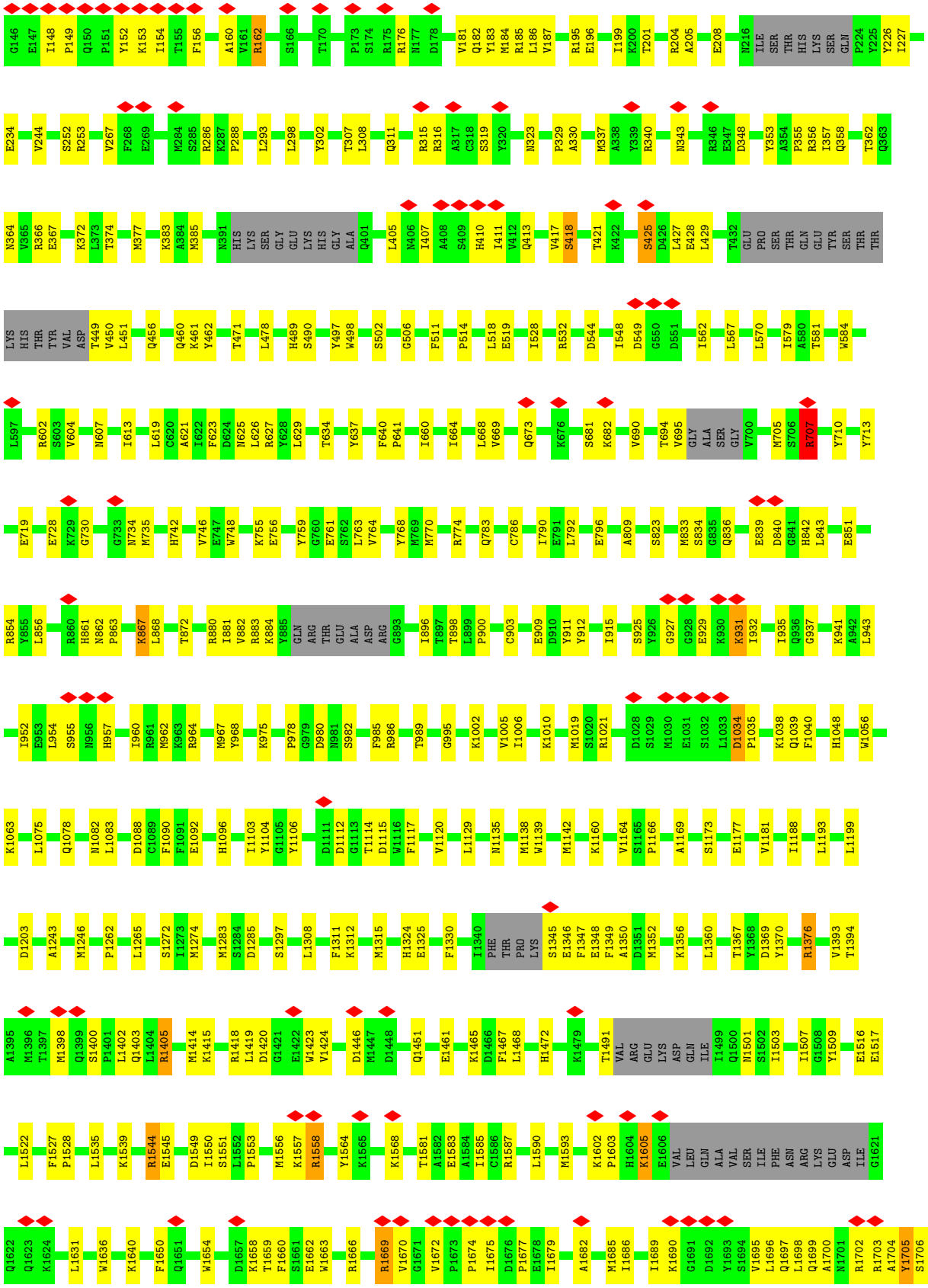
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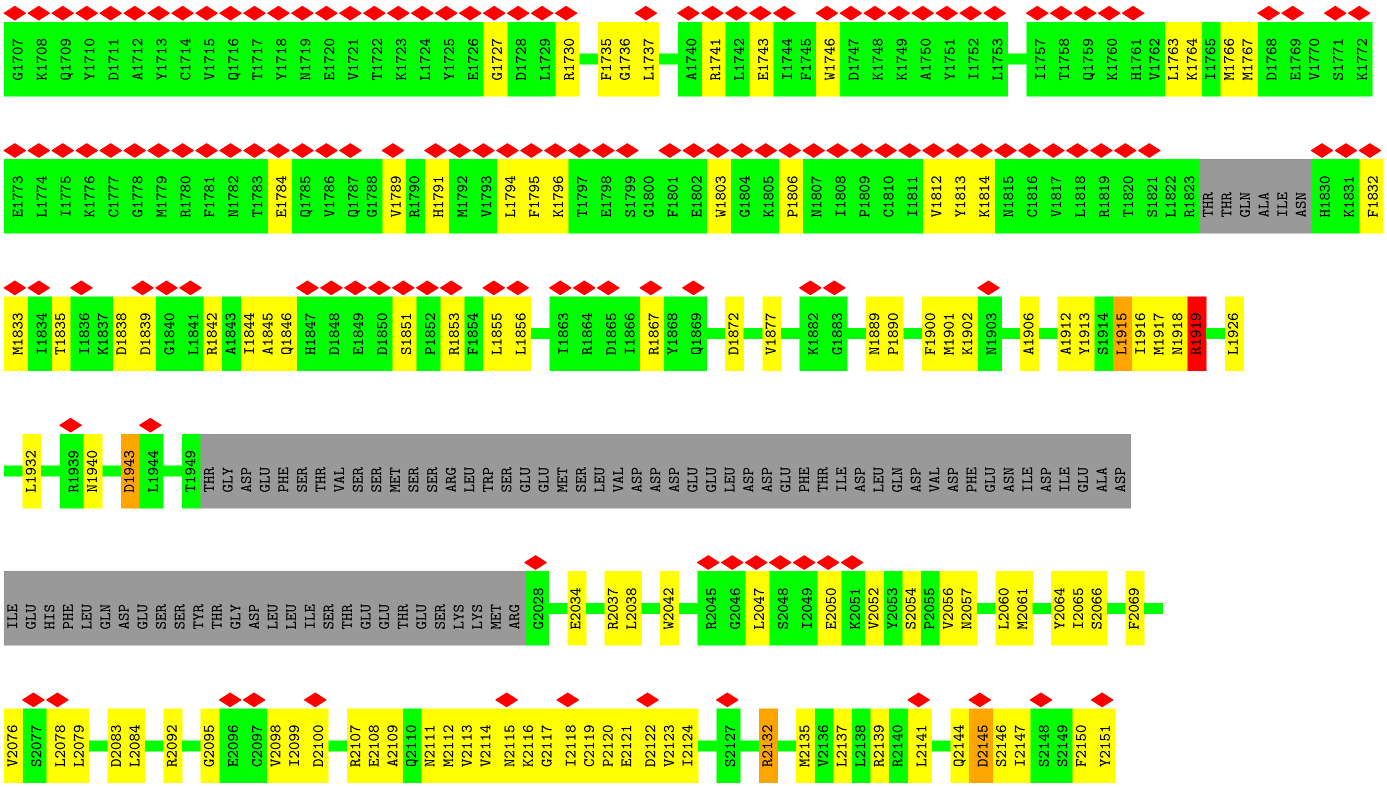

• Molecule 1: RNA-directed RNA polymerase L

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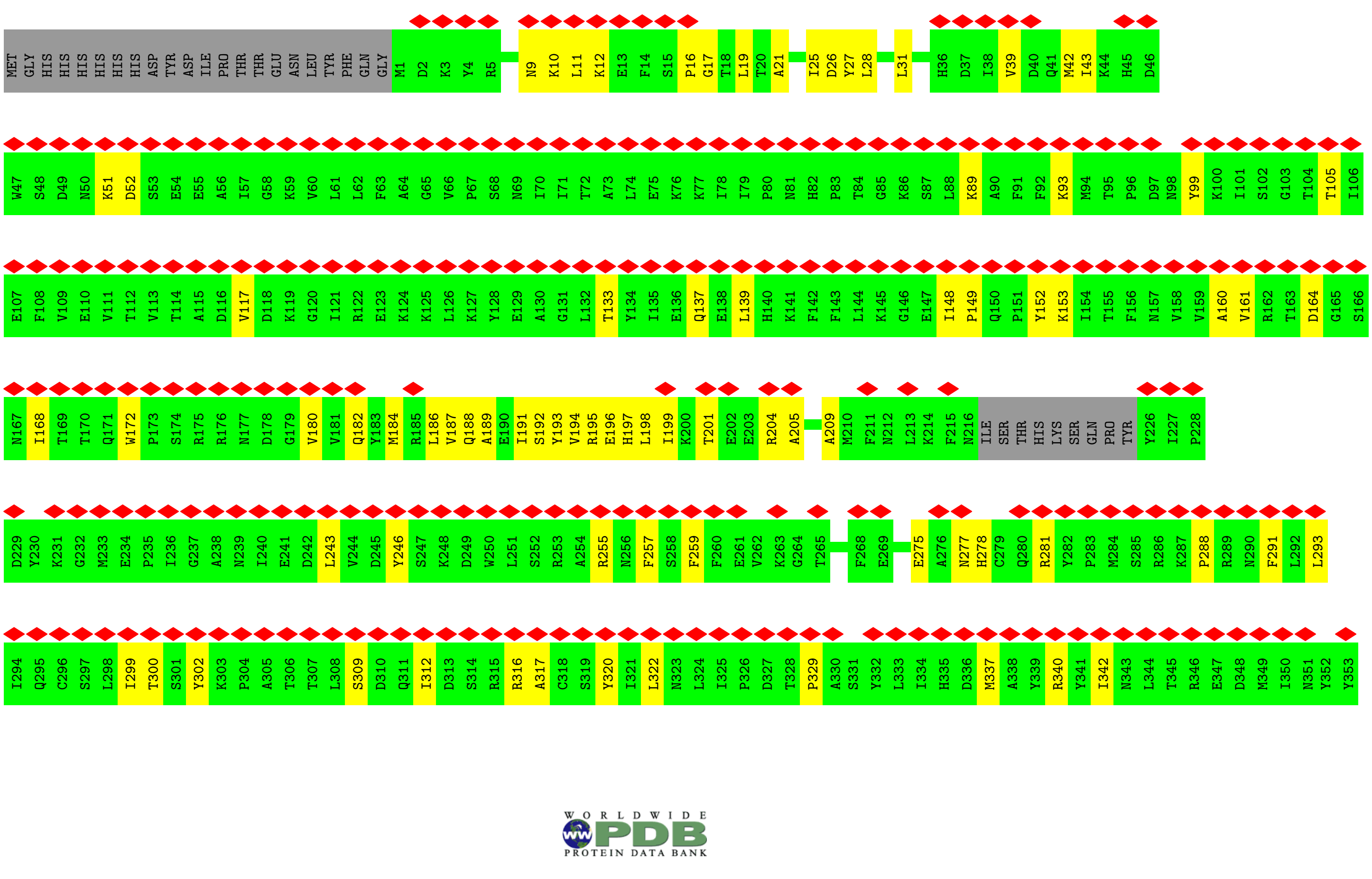

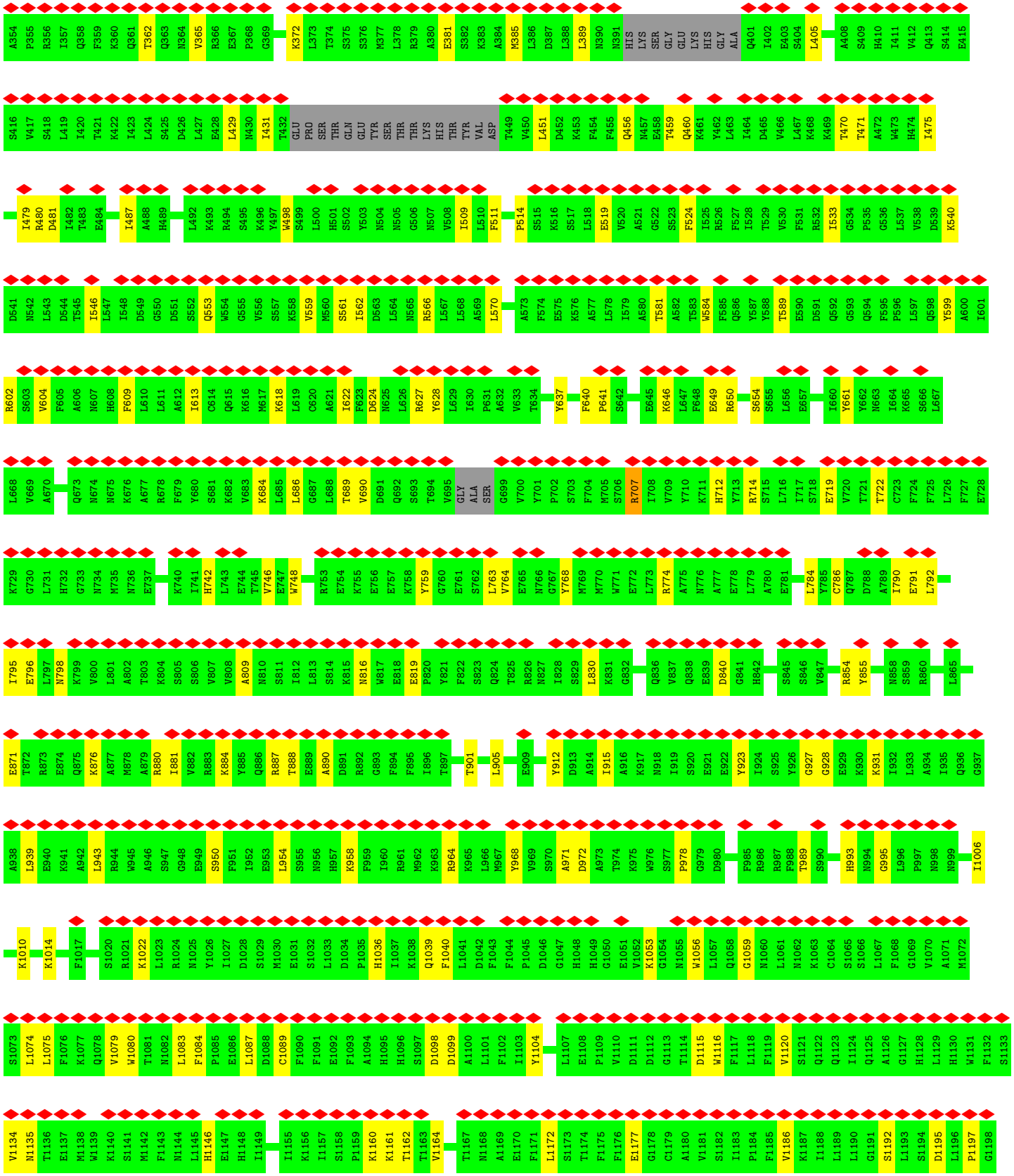
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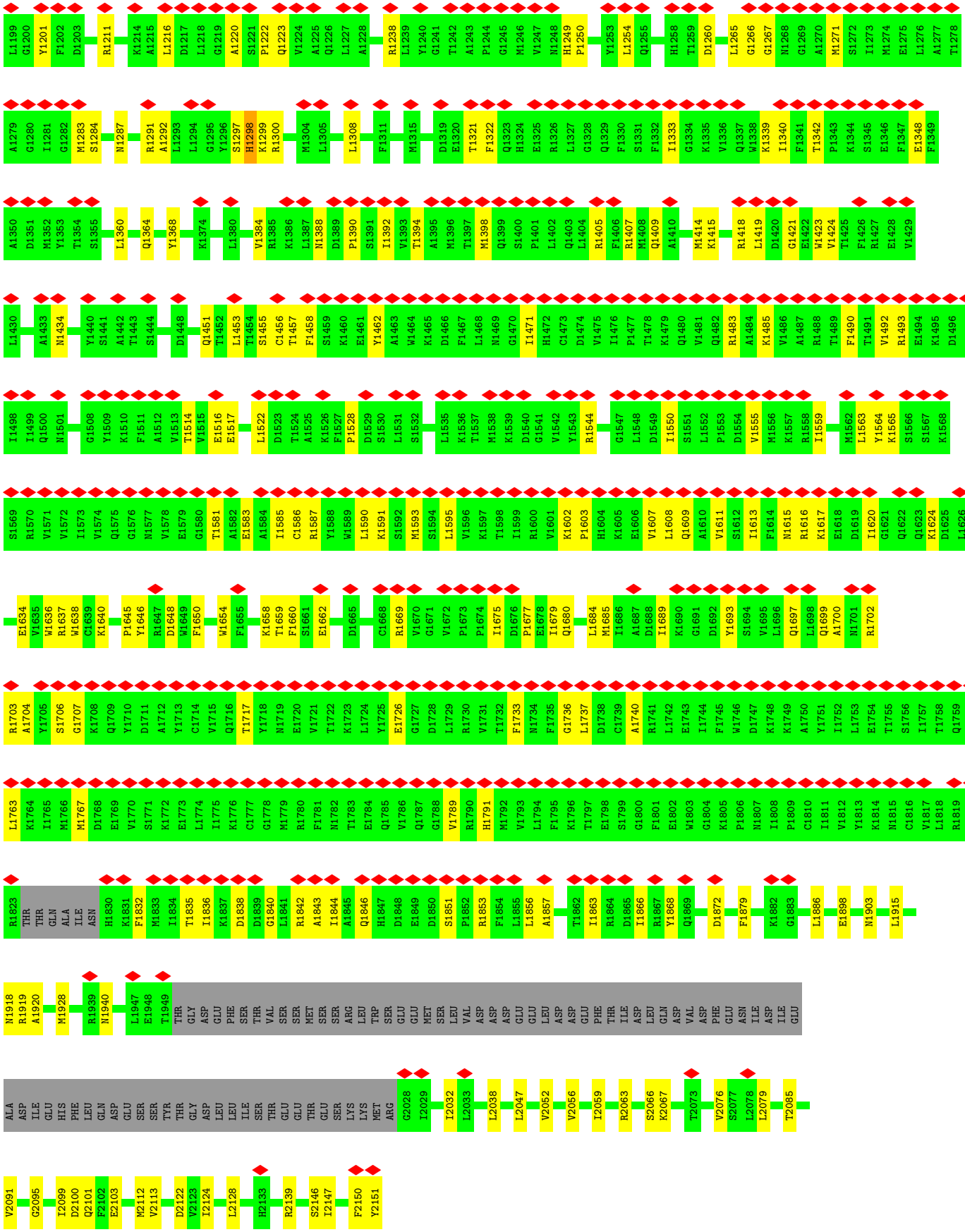
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• Molecule 1: RNA-directed RNA polymerase L

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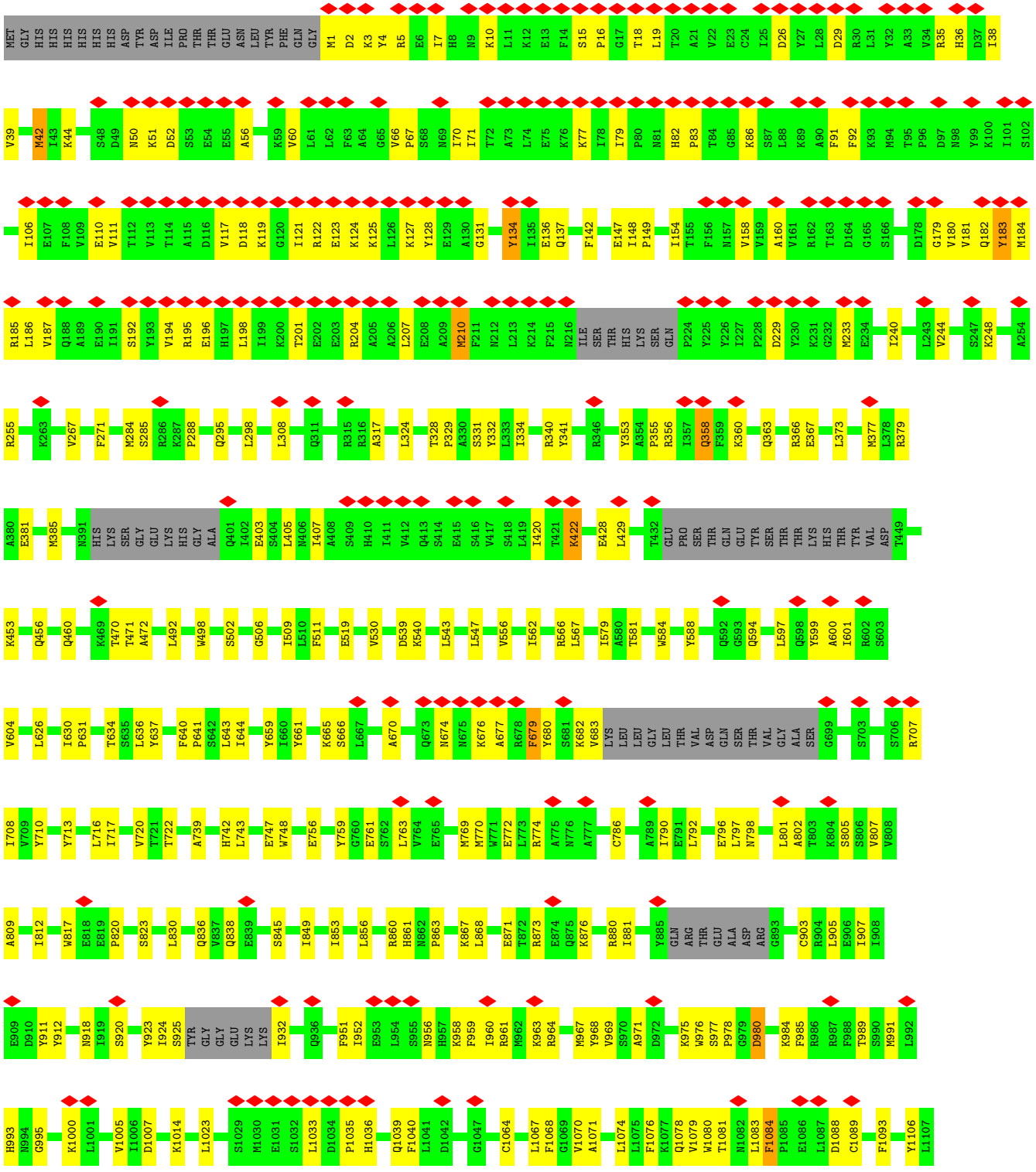

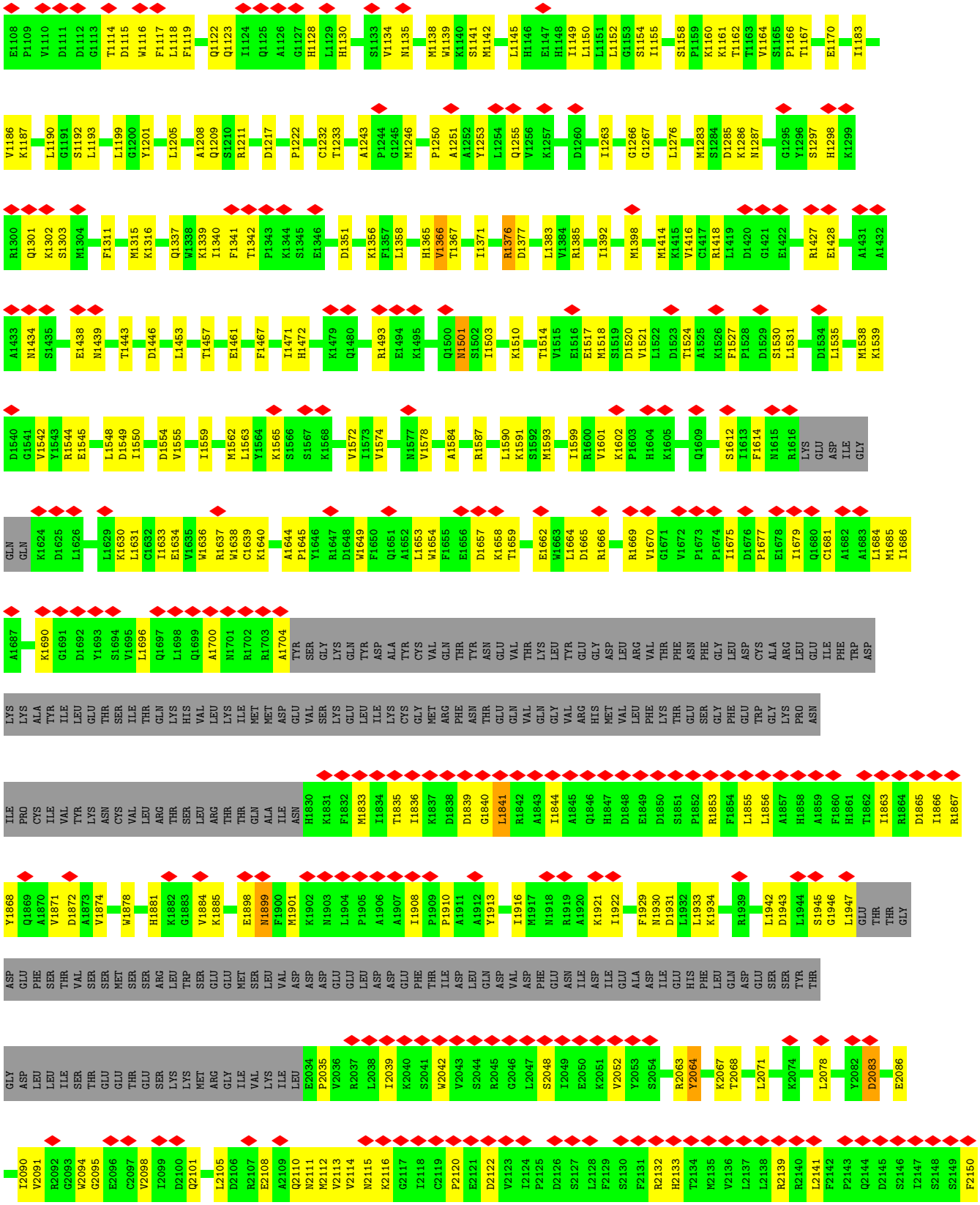

• Molecule 1: RNA-directed RNA polymerase L

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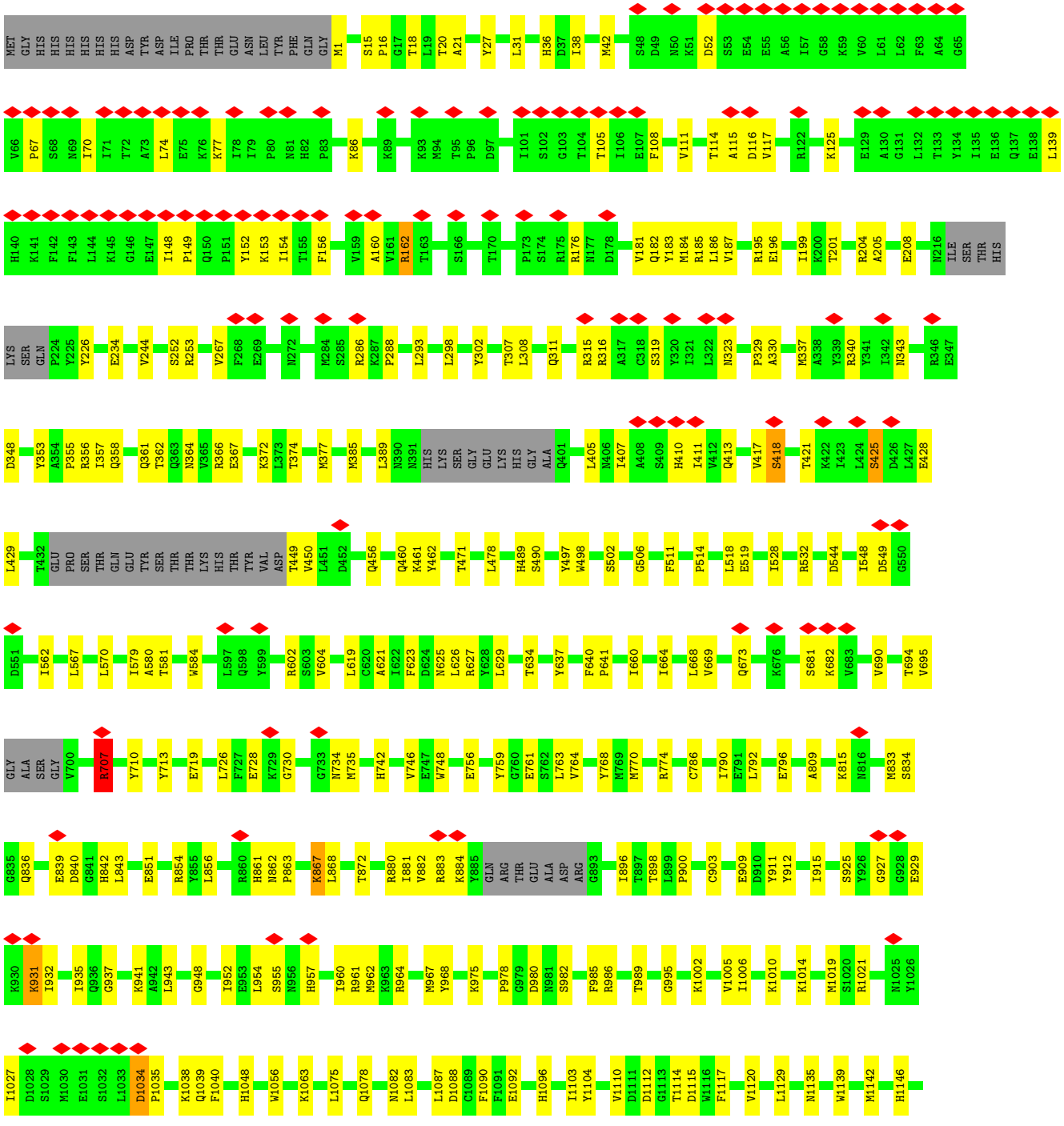

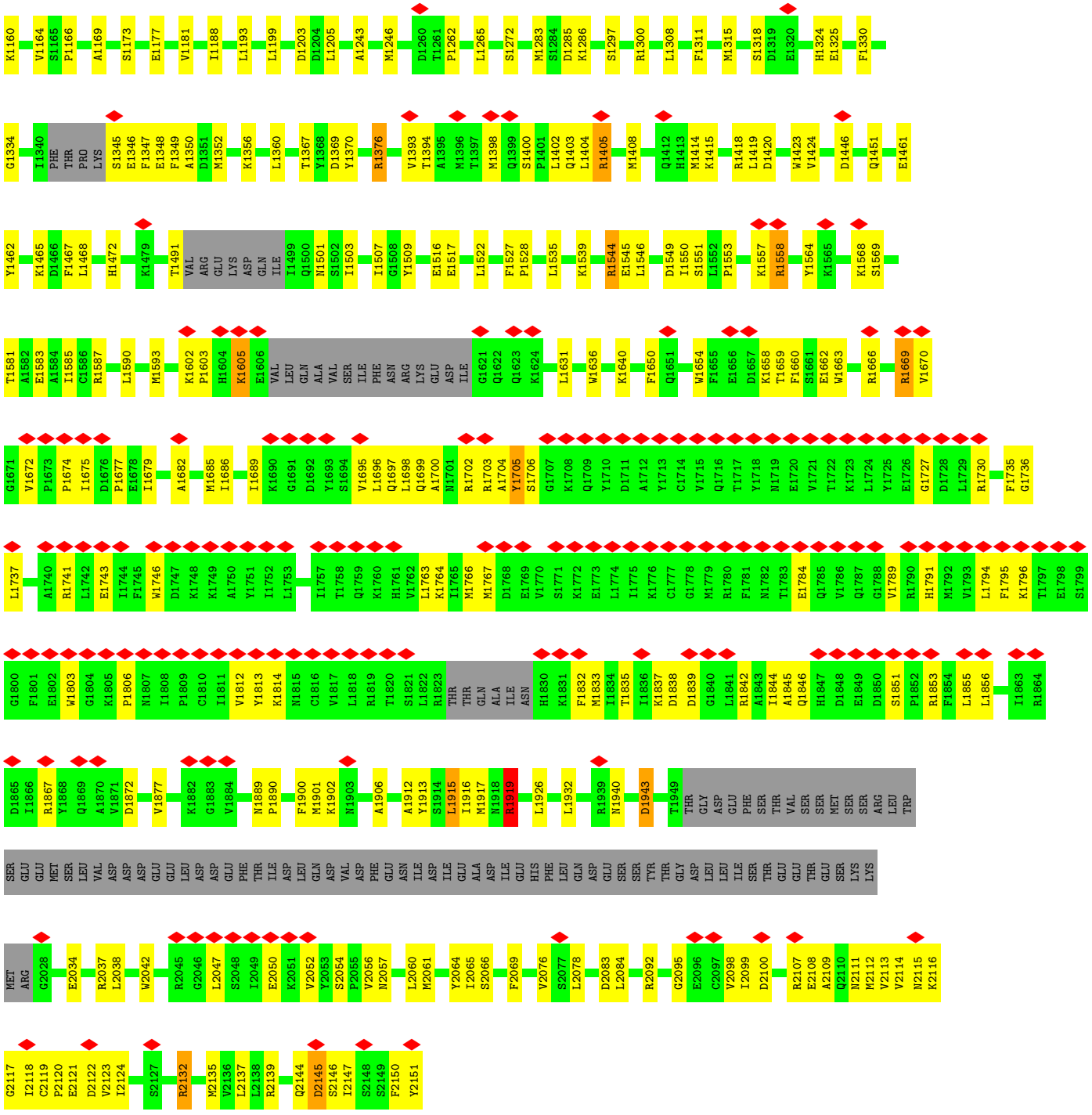
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D1865 I1866 R1867 Y1868 Q1869 A1870 V1871 D1872 V1877 K1882 G1883 V1884 N1889 P1890 F1900 M1901 K1902 N1903 A1906 A1912 Y1913 S1914 L1915 I1916 M1917 N1918 R1919 L1926 L1932 R1939 N1940 D1943 T1949 THR GLY ASP GLU PHE SER THR VAL SER SER MET SER SER ARG LEU TRP
SER GLU GLU MET SER LEU VAL ASP ASP ASP ASP GLU GLU GLU LEU ASP ASP GLU PHE THR ILE ASP LEU GLN ASP VAL ASP PHE GLU ASN ILE ASP ILE GLU ALA ASP ILE GLU HIS PHE LEU GLN ASP GLU SER SER TYR THR GLY ASP LEU LEU ILE SER THR GLU GLU THR GLU SER LYS LYS
MET ARG G2028 E2034 R2037 L2038 W2042 R2045 G2046 L2047 S2048 I2049 E2050 K2051 V2052 Y2053 S2054 P2055 V2056 N2057 L2060 M2061 Y2064 I2065 S2066 F2069 V2076 S2077 L2078 D2083 L2084 R2092 G2095 E2096 C2097 V2098 I2099 D2100 R2107 E2108 A2109 Q2110 N2111 M2112 V2113 V2114 N2115 K2116
G2117 I2118 C2119 P2120 E2121 D2122 V2123 I2124 S2127 R2132 M2135 V2136 L2137 L2138 R2139 Q2144 D2145 S2146 I2147 S2148 S2149 F2150 Y2151

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of particles used	28695	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	105000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.980	Depositor
Minimum map value	-1.238	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.032	Depositor
Recommended contour level	0.305	Depositor
Map size (Å)	587.3, 587.3, 587.3	wwPDB
Map dimensions	700, 700, 700	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.839, 0.839, 0.839	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.29	0/15469	0.49	0/20911
1	B	0.29	0/15469	0.49	0/20911
1	C	0.31	0/16505	0.49	0/22303
1	D	0.27	0/16764	0.47	0/22656
1	E	0.31	0/16505	0.49	0/22303
1	F	0.27	0/16764	0.47	0/22656
All	All	0.29	0/97476	0.48	0/131740

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	B	0	2
1	C	0	4
1	E	0	4
All	All	0	11

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (11) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	2139	ARG	Sidechain
1	B	2132	ARG	Sidechain
1	B	2139	ARG	Sidechain
1	C	162	ARG	Sidechain
1	C	185	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	C	1919	ARG	Sidechain
1	C	707	ARG	Sidechain
1	E	162	ARG	Sidechain
1	E	185	ARG	Sidechain
1	E	1919	ARG	Sidechain
1	E	707	ARG	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	15128	0	15210	413	0
1	B	15128	0	15210	418	0
1	C	16146	0	16240	441	0
1	D	16400	0	16506	381	0
1	E	16146	0	16240	445	0
1	F	16400	0	16506	382	0
All	All	95348	0	95912	2136	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 11.

All (2136) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:196:GLU:HG3	1:C:2056:VAL:CG2	1.66	1.24
1:F:196:GLU:HG3	1:E:2056:VAL:CG2	1.66	1.23
1:D:196:GLU:HG3	1:C:2056:VAL:HG21	1.22	1.20
1:C:417:VAL:HG11	1:A:707:ARG:HB3	1.27	1.16
1:B:707:ARG:HH12	1:E:410:HIS:CE1	1.63	1.16
1:C:410:HIS:CE1	1:A:707:ARG:HH12	1.63	1.15
1:B:1302:LYS:HE3	1:A:1434:ASN:ND2	1.63	1.13
1:F:196:GLU:HG3	1:E:2056:VAL:HG21	1.22	1.13
1:B:1434:ASN:ND2	1:A:1302:LYS:HE3	1.63	1.12
1:F:2150:PHE:HB2	1:E:2113:VAL:HG21	1.19	1.10
1:D:2150:PHE:HB2	1:C:2113:VAL:HG21	1.19	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2146:SER:HB2	1:E:2117:GLY:HA2	1.35	1.08
1:B:707:ARG:HB3	1:E:417:VAL:HG11	1.27	1.08
1:D:2146:SER:HB2	1:C:2117:GLY:HA2	1.35	1.08
1:F:205:ALA:HB2	1:E:2052:VAL:HG21	1.36	1.07
1:D:189:ALA:CB	1:C:2115:ASN:HB2	1.85	1.07
1:F:189:ALA:CB	1:E:2115:ASN:HB2	1.85	1.06
1:D:1360:LEU:HD23	1:C:2047:LEU:HD13	1.39	1.04
1:F:1514:THR:HG22	1:E:2050:GLU:CG	1.86	1.04
1:D:1514:THR:HG22	1:C:2050:GLU:HG3	1.40	1.03
1:D:1514:THR:HG22	1:C:2050:GLU:CG	1.86	1.03
1:D:205:ALA:HB2	1:C:2052:VAL:HG21	1.36	1.03
1:F:1360:LEU:HD23	1:E:2047:LEU:HD13	1.39	1.02
1:D:201:THR:HB	1:C:2124:ILE:HD13	1.43	1.01
1:F:1514:THR:HG22	1:E:2050:GLU:HG3	1.40	0.99
1:F:201:THR:HB	1:E:2124:ILE:HD13	1.43	0.99
1:D:201:THR:HB	1:C:2124:ILE:CD1	1.92	0.98
1:F:201:THR:HB	1:E:2124:ILE:CD1	1.92	0.98
1:D:2150:PHE:HE2	1:C:2118:ILE:O	1.46	0.97
1:F:2150:PHE:HE2	1:E:2118:ILE:O	1.46	0.96
1:D:2146:SER:HB2	1:C:2117:GLY:CA	1.96	0.96
1:B:597:LEU:CD1	1:E:421:THR:HG22	1.96	0.96
1:F:2146:SER:HB2	1:E:2117:GLY:CA	1.96	0.95
1:C:421:THR:HG21	1:A:599:TYR:CE1	2.02	0.94
1:B:599:TYR:CE1	1:E:421:THR:HG21	2.02	0.94
1:C:421:THR:HG22	1:A:597:LEU:CD1	1.96	0.94
1:D:2150:PHE:CB	1:C:2113:VAL:HG21	1.99	0.93
1:F:2124:ILE:HD12	1:E:204:ARG:NH2	1.84	0.92
1:F:2150:PHE:CB	1:E:2113:VAL:HG21	1.99	0.92
1:D:2124:ILE:HD12	1:C:204:ARG:NH2	1.84	0.91
1:F:164:ASP:HB3	1:E:2107:ARG:HD2	1.52	0.91
1:C:316:ARG:HE	1:E:323:ASN:HD21	1.18	0.89
1:D:164:ASP:HB3	1:C:2107:ARG:HD2	1.52	0.88
1:B:1434:ASN:ND2	1:A:1302:LYS:CE	2.37	0.88
1:C:411:ILE:HD12	1:A:674:ASN:CB	2.03	0.88
1:B:674:ASN:HB2	1:E:411:ILE:HD12	1.57	0.87
1:F:193:TYR:HB2	1:E:2116:LYS:HD3	1.56	0.87
1:F:133:THR:HG22	1:F:137:GLN:HE22	1.40	0.87
1:C:411:ILE:HD12	1:A:674:ASN:HB2	1.57	0.87
1:C:759:TYR:HB3	1:C:763:LEU:HD23	1.57	0.87
1:C:323:ASN:HD21	1:E:316:ARG:HE	1.18	0.86
1:B:674:ASN:CB	1:E:411:ILE:HD12	2.03	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2150:PHE:HB2	1:C:2113:VAL:CG2	2.05	0.86
1:B:1302:LYS:CE	1:A:1434:ASN:ND2	2.37	0.86
1:E:759:TYR:HB3	1:E:763:LEU:HD23	1.57	0.86
1:D:193:TYR:HB2	1:C:2116:LYS:HD3	1.56	0.86
1:B:1434:ASN:HD21	1:A:1302:LYS:HE3	1.41	0.85
1:C:411:ILE:HG21	1:A:674:ASN:HD22	1.42	0.85
1:D:133:THR:HG22	1:D:137:GLN:HE22	1.40	0.84
1:B:2151:TYR:HE1	1:A:2113:VAL:HG11	1.42	0.84
1:D:2047:LEU:HD12	1:C:1360:LEU:CD2	2.07	0.84
1:F:2150:PHE:HB2	1:E:2113:VAL:CG2	2.05	0.84
1:B:1503:ILE:HD13	1:B:1563:LEU:HB3	1.60	0.84
1:A:1503:ILE:HD13	1:A:1563:LEU:HB3	1.60	0.83
1:B:674:ASN:HD22	1:E:411:ILE:HG21	1.42	0.83
1:C:411:ILE:HG21	1:A:674:ASN:ND2	1.92	0.83
1:B:674:ASN:ND2	1:E:411:ILE:HG21	1.92	0.83
1:B:707:ARG:HB3	1:E:417:VAL:CG1	2.09	0.83
1:F:2047:LEU:HD12	1:E:1360:LEU:CD2	2.07	0.83
1:B:2113:VAL:HG11	1:A:2151:TYR:HE1	1.42	0.82
1:F:2150:PHE:CE2	1:E:2118:ILE:O	2.32	0.82
1:B:1434:ASN:HD21	1:A:1302:LYS:CE	1.92	0.82
1:C:417:VAL:CG1	1:A:707:ARG:HB3	2.09	0.82
1:C:1763:LEU:HA	1:C:1766:MET:HG2	1.61	0.82
1:B:1302:LYS:HE3	1:A:1434:ASN:HD21	1.41	0.82
1:B:1302:LYS:CE	1:A:1434:ASN:HD21	1.92	0.82
1:E:1763:LEU:HA	1:E:1766:MET:HG2	1.61	0.81
1:D:2147:ILE:HD12	1:C:2114:VAL:HG13	1.61	0.81
1:F:2147:ILE:HD12	1:E:2114:VAL:HG13	1.61	0.81
1:D:2150:PHE:CE2	1:C:2118:ILE:O	2.32	0.81
1:B:707:ARG:NH1	1:E:410:HIS:NE2	2.30	0.80
1:B:1574:VAL:HG11	1:B:1578:VAL:HB	1.64	0.80
1:F:192:SER:OG	1:E:2112:MET:HB3	1.82	0.80
1:A:1574:VAL:HG11	1:A:1578:VAL:HB	1.64	0.79
1:C:410:HIS:NE2	1:A:707:ARG:NH1	2.30	0.79
1:D:192:SER:OG	1:C:2112:MET:HB3	1.82	0.79
1:B:707:ARG:NH1	1:E:410:HIS:CE1	2.48	0.79
1:B:2064:TYR:HB2	1:A:2150:PHE:CE1	2.18	0.79
1:C:323:ASN:ND2	1:E:316:ARG:HE	1.82	0.78
1:C:410:HIS:CE1	1:A:707:ARG:NH1	2.48	0.78
1:F:1700:ALA:HA	1:F:1704:ALA:HB3	1.66	0.77
1:B:2150:PHE:CE1	1:A:2064:TYR:HB2	2.18	0.77
1:C:316:ARG:HE	1:E:323:ASN:ND2	1.82	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:182:GLN:O	1:F:186:LEU:HD13	1.85	0.77
1:D:193:TYR:CB	1:C:2116:LYS:HD3	2.14	0.77
1:D:189:ALA:HB2	1:C:2115:ASN:HB2	1.67	0.77
1:F:193:TYR:CB	1:E:2116:LYS:HD3	2.14	0.77
1:D:2052:VAL:HG21	1:C:205:ALA:HB2	1.67	0.77
1:D:589:THR:HG21	1:D:1595:LEU:HB3	1.67	0.76
1:D:1700:ALA:HA	1:D:1704:ALA:HB3	1.66	0.76
1:C:954:LEU:HD12	1:C:955:SER:H	1.51	0.76
1:F:2052:VAL:HG21	1:E:205:ALA:HB2	1.67	0.76
1:D:182:GLN:O	1:D:186:LEU:HD13	1.85	0.76
1:F:589:THR:HG21	1:F:1595:LEU:HB3	1.67	0.75
1:B:599:TYR:HE1	1:E:421:THR:HG21	1.51	0.75
1:E:954:LEU:HD12	1:E:955:SER:H	1.51	0.75
1:C:421:THR:HG21	1:A:599:TYR:HE1	1.51	0.75
1:D:2124:ILE:HD12	1:C:204:ARG:HH22	1.52	0.74
1:A:1199:LEU:HA	1:A:1340:ILE:HD11	1.69	0.74
1:D:927:GLY:HA2	1:D:931:LYS:HB3	1.69	0.74
1:F:188:GLN:NE2	1:E:2108:GLU:HG3	2.03	0.74
1:F:201:THR:CB	1:E:2124:ILE:HD13	2.18	0.74
1:D:1636:TRP:HH2	1:D:1684:LEU:HD22	1.53	0.74
1:A:127:LYS:HG3	1:A:128:TYR:HD1	1.53	0.74
1:D:188:GLN:NE2	1:C:2108:GLU:HG3	2.03	0.73
1:C:411:ILE:CD1	1:A:674:ASN:CB	2.66	0.73
1:C:2095:GLY:HA2	1:C:2098:VAL:HG22	1.70	0.73
1:B:2113:VAL:HG11	1:A:2151:TYR:CE1	2.23	0.73
1:B:1199:LEU:HA	1:B:1340:ILE:HD11	1.69	0.73
1:F:1675:ILE:HG22	1:F:1677:PRO:HD2	1.70	0.73
1:D:1675:ILE:HG22	1:D:1677:PRO:HD2	1.70	0.73
1:F:927:GLY:HA2	1:F:931:LYS:HB3	1.69	0.73
1:F:2146:SER:CB	1:E:2118:ILE:H	2.02	0.73
1:E:2095:GLY:HA2	1:E:2098:VAL:HG22	1.70	0.73
1:D:16:PRO:HB2	1:C:2122:ASP:CG	2.09	0.73
1:B:2151:TYR:CE1	1:A:2113:VAL:HG11	2.23	0.73
1:F:16:PRO:HB2	1:E:2122:ASP:CG	2.09	0.73
1:E:1557:LYS:HG3	1:E:1558:ARG:HG2	1.71	0.73
1:D:759:TYR:HB3	1:D:763:LEU:HD23	1.69	0.72
1:F:189:ALA:HB2	1:E:2115:ASN:HB2	1.67	0.72
1:F:759:TYR:HB3	1:F:763:LEU:HD23	1.69	0.72
1:D:2146:SER:CB	1:C:2118:ILE:H	2.02	0.72
1:B:127:LYS:HG3	1:B:128:TYR:HD1	1.53	0.72
1:B:674:ASN:CB	1:E:411:ILE:CD1	2.66	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:201:THR:CB	1:C:2124:ILE:HD13	2.18	0.72
1:F:1636:TRP:HH2	1:F:1684:LEU:HD22	1.53	0.72
1:F:2124:ILE:HD12	1:E:204:ARG:HH22	1.52	0.72
1:C:1120:VAL:HG11	1:C:1135:ASN:HB3	1.72	0.72
1:C:1654:TRP:HB3	1:C:1872:ASP:HB3	1.72	0.72
1:D:1360:LEU:CD2	1:C:2047:LEU:HD13	2.18	0.71
1:C:1557:LYS:HG3	1:C:1558:ARG:HG2	1.71	0.71
1:E:1654:TRP:HB3	1:E:1872:ASP:HB3	1.72	0.71
1:F:2147:ILE:CD1	1:E:2114:VAL:HG22	2.20	0.71
1:D:189:ALA:CB	1:C:2115:ASN:CB	2.68	0.71
1:D:2147:ILE:CD1	1:C:2114:VAL:HG22	2.20	0.71
1:F:1360:LEU:HD23	1:E:2047:LEU:CD1	2.19	0.71
1:D:1360:LEU:HD23	1:C:2047:LEU:CD1	2.19	0.71
1:F:28:LEU:HD22	1:F:191:ILE:HG23	1.72	0.71
1:F:1492:VAL:HG13	1:F:1493:ARG:HG3	1.72	0.71
1:D:1492:VAL:HG13	1:D:1493:ARG:HG3	1.72	0.71
1:D:28:LEU:HD22	1:D:191:ILE:HG23	1.72	0.71
1:D:1364:GLN:OE1	1:C:2047:LEU:HA	1.91	0.71
1:B:759:TYR:HB3	1:B:763:LEU:HD23	1.73	0.70
1:C:2139:ARG:HH21	1:C:2144:GLN:HB3	1.56	0.70
1:C:316:ARG:NE	1:E:323:ASN:HD21	1.89	0.70
1:B:181:VAL:HB	1:B:185:ARG:HH22	1.56	0.70
1:F:1364:GLN:OE1	1:E:2047:LEU:HA	1.91	0.70
1:E:1120:VAL:HG11	1:E:1135:ASN:HB3	1.72	0.70
1:B:674:ASN:HB3	1:E:411:ILE:CD1	2.22	0.70
1:F:189:ALA:CB	1:E:2115:ASN:CB	2.68	0.70
1:F:1120:VAL:HG11	1:F:1135:ASN:HB3	1.74	0.70
1:F:1733:PHE:HB2	1:F:1740:ALA:HB3	1.74	0.70
1:A:181:VAL:HB	1:A:185:ARG:HH22	1.56	0.70
1:E:2139:ARG:HH21	1:E:2144:GLN:HB3	1.56	0.70
1:F:2124:ILE:CD1	1:E:204:ARG:NH2	2.55	0.70
1:D:1195:ASP:OD2	1:D:1211:ARG:NH1	2.22	0.69
1:C:323:ASN:HD21	1:E:316:ARG:NE	1.89	0.69
1:D:2124:ILE:CD1	1:C:204:ARG:NH2	2.55	0.69
1:D:189:ALA:HA	1:C:2112:MET:HA	1.74	0.69
1:B:2064:TYR:HB2	1:A:2150:PHE:HE1	1.55	0.69
1:F:189:ALA:HA	1:E:2112:MET:HA	1.74	0.69
1:F:1360:LEU:CD2	1:E:2047:LEU:HD13	2.18	0.69
1:B:1434:ASN:HD22	1:A:1302:LYS:HE3	1.53	0.69
1:B:2150:PHE:HE1	1:A:2064:TYR:HB2	1.55	0.69
1:F:196:GLU:HB3	1:E:2057:ASN:OD1	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2109:ALA:O	1:C:2112:MET:HG2	1.93	0.69
1:C:411:ILE:CD1	1:A:674:ASN:HB3	2.22	0.69
1:B:470:THR:HG22	1:B:472:ALA:H	1.57	0.69
1:A:470:THR:HG22	1:A:472:ALA:H	1.57	0.69
1:A:631:PRO:HD3	1:A:717:ILE:HD11	1.73	0.69
1:B:631:PRO:HD3	1:B:717:ILE:HD11	1.73	0.69
1:F:2147:ILE:HD11	1:E:2114:VAL:HG22	1.75	0.69
1:D:196:GLU:HB3	1:C:2057:ASN:OD1	1.92	0.68
1:D:1733:PHE:HB2	1:D:1740:ALA:HB3	1.74	0.68
1:A:1916:ILE:HG21	1:A:2039:ILE:HG21	1.74	0.68
1:D:1120:VAL:HG11	1:D:1135:ASN:HB3	1.74	0.68
1:E:2109:ALA:O	1:E:2112:MET:HG2	1.93	0.68
1:B:1916:ILE:HG21	1:B:2039:ILE:HG21	1.74	0.68
1:D:2147:ILE:HD11	1:C:2114:VAL:HG22	1.75	0.68
1:A:759:TYR:HB3	1:A:763:LEU:HD23	1.73	0.68
1:C:74:LEU:HA	1:C:77:LYS:HD3	1.76	0.68
1:F:1195:ASP:OD2	1:F:1211:ARG:NH1	2.22	0.68
1:D:204:ARG:NH1	1:C:2054:SER:HB2	2.10	0.67
1:C:421:THR:CG2	1:A:597:LEU:CD1	2.71	0.67
1:F:205:ALA:CB	1:E:2052:VAL:HG21	2.20	0.67
1:E:74:LEU:HA	1:E:77:LYS:HD3	1.76	0.67
1:D:1919:ARG:NH1	1:D:2085:THR:OG1	2.28	0.67
1:F:1919:ARG:NH1	1:F:2085:THR:OG1	2.28	0.67
1:A:1150:LEU:HD22	1:A:1155:ILE:HD11	1.75	0.67
1:E:1199:LEU:HD11	1:E:1394:THR:HG21	1.77	0.67
1:D:205:ALA:CB	1:C:2052:VAL:HG21	2.20	0.67
1:B:1150:LEU:HD22	1:B:1155:ILE:HD11	1.75	0.67
1:D:133:THR:O	1:D:137:GLN:NE2	2.28	0.67
1:C:1199:LEU:HD11	1:C:1394:THR:HG21	1.77	0.67
1:F:204:ARG:NH1	1:E:2054:SER:HB2	2.10	0.67
1:A:1633:ILE:HD12	1:A:1681:CYS:HB3	1.76	0.67
1:B:1439:ASN:HB3	1:B:2132:ARG:HD2	1.76	0.67
1:F:133:THR:O	1:F:137:GLN:NE2	2.28	0.67
1:B:597:LEU:CD1	1:E:421:THR:CG2	2.71	0.67
1:F:193:TYR:CD1	1:E:2116:LYS:NZ	2.61	0.67
1:E:1590:LEU:HA	1:E:1593:MET:HG3	1.77	0.67
1:B:1633:ILE:HD12	1:B:1681:CYS:HB3	1.76	0.66
1:F:189:ALA:HB2	1:E:2111:ASN:O	1.95	0.66
1:E:1400:SER:HB3	1:E:1402:LEU:HD12	1.77	0.66
1:B:1630:LYS:HG2	1:B:1863:ILE:HD12	1.76	0.66
1:D:2146:SER:HB3	1:C:2118:ILE:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:293:LEU:HD11	1:D:562:ILE:HG22	1.77	0.66
1:D:690:VAL:HG11	1:D:943:LEU:HD22	1.77	0.66
1:D:1321:THR:HG22	1:D:1322:PHE:H	1.60	0.66
1:F:293:LEU:HD11	1:F:562:ILE:HG22	1.77	0.66
1:A:679:PHE:HZ	1:A:1166:PRO:HD2	1.61	0.66
1:C:1590:LEU:HA	1:C:1593:MET:HG3	1.77	0.66
1:E:1675:ILE:HG22	1:E:1677:PRO:HD2	1.78	0.66
1:D:196:GLU:HG3	1:C:2056:VAL:HG23	1.73	0.66
1:B:1302:LYS:HE3	1:A:1434:ASN:HD22	1.53	0.66
1:D:164:ASP:CB	1:C:2107:ARG:HD2	2.26	0.65
1:D:189:ALA:HB2	1:C:2111:ASN:O	1.95	0.65
1:D:519:GLU:OE2	1:D:1405:ARG:NH1	2.30	0.65
1:A:1371:ILE:HG12	1:A:1524:THR:HG21	1.78	0.65
1:A:1630:LYS:HG2	1:A:1863:ILE:HD12	1.76	0.65
1:B:679:PHE:HZ	1:B:1166:PRO:HD2	1.61	0.65
1:F:690:VAL:HG11	1:F:943:LEU:HD22	1.77	0.65
1:F:1195:ASP:HB2	1:F:1398:MET:HE2	1.79	0.65
1:E:195:ARG:HG3	1:E:196:GLU:HG2	1.78	0.65
1:F:519:GLU:OE2	1:F:1405:ARG:NH1	2.30	0.65
1:F:2063:ARG:HG2	1:E:2150:PHE:CD1	2.32	0.65
1:C:1400:SER:HB3	1:C:1402:LEU:HD12	1.77	0.65
1:C:421:THR:CG2	1:A:597:LEU:HD12	2.27	0.65
1:C:1700:ALA:HA	1:C:1704:ALA:HB3	1.79	0.65
1:D:2063:ARG:HG2	1:C:2150:PHE:CD1	2.32	0.65
1:B:597:LEU:HD12	1:E:421:THR:CG2	2.27	0.65
1:B:985:PHE:HE2	1:B:1068:PHE:HB2	1.61	0.65
1:B:1921:LYS:NZ	1:B:1922:ILE:O	2.30	0.65
1:A:1868:TYR:CG	1:A:1898:GLU:HB2	2.32	0.65
1:D:117:VAL:HG13	1:D:160:ALA:HB3	1.79	0.65
1:F:1321:THR:HG22	1:F:1322:PHE:H	1.60	0.65
1:B:1868:TYR:CG	1:B:1898:GLU:HB2	2.32	0.64
1:C:1675:ILE:HG22	1:C:1677:PRO:HD2	1.78	0.64
1:A:1921:LYS:NZ	1:A:1922:ILE:O	2.30	0.64
1:F:196:GLU:HG3	1:E:2056:VAL:HG23	1.73	0.64
1:C:195:ARG:HG3	1:C:196:GLU:HG2	1.78	0.64
1:B:1371:ILE:HG12	1:B:1524:THR:HG21	1.78	0.64
1:F:117:VAL:HG13	1:F:160:ALA:HB3	1.79	0.64
1:A:1118:LEU:HG	1:A:1122:GLN:HE22	1.61	0.64
1:B:1118:LEU:HG	1:B:1122:GLN:HE22	1.61	0.64
1:C:1522:LEU:HD12	1:C:1528:PRO:HB3	1.79	0.64
1:F:164:ASP:CB	1:E:2107:ARG:HD2	2.26	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:188:GLN:CD	1:E:2108:GLU:HG3	2.18	0.64
1:D:480:ARG:HD3	1:D:1238:ARG:HH12	1.62	0.64
1:F:2146:SER:HB3	1:E:2118:ILE:H	1.61	0.64
1:D:1195:ASP:HB2	1:D:1398:MET:HE2	1.79	0.64
1:F:480:ARG:HD3	1:F:1238:ARG:HH12	1.62	0.64
1:A:626:LEU:HD22	1:A:720:VAL:HG21	1.80	0.64
1:E:1700:ALA:HA	1:E:1704:ALA:HB3	1.79	0.64
1:D:1514:THR:HB	1:C:2050:GLU:OE2	1.98	0.64
1:B:807:VAL:HG23	1:B:918:ASN:HD22	1.62	0.64
1:A:807:VAL:HG23	1:A:918:ASN:HD22	1.62	0.64
1:A:985:PHE:HE2	1:A:1068:PHE:HB2	1.61	0.64
1:E:619:LEU:HD22	1:E:660:ILE:HD12	1.80	0.64
1:F:196:GLU:CG	1:E:2056:VAL:CG2	2.61	0.63
1:F:854:ARG:NH2	1:F:1348:GLU:OE1	2.32	0.63
1:B:597:LEU:HD12	1:E:421:THR:HG22	1.79	0.63
1:B:626:LEU:HD22	1:B:720:VAL:HG21	1.80	0.63
1:B:1183:ILE:HD11	1:B:1187:LYS:HD3	1.81	0.63
1:D:193:TYR:CD1	1:C:2116:LYS:NZ	2.61	0.63
1:F:1192:SER:HA	1:F:1211:ARG:HD2	1.81	0.63
1:D:188:GLN:CD	1:C:2108:GLU:HG3	2.18	0.63
1:E:1522:LEU:HD12	1:E:1528:PRO:HB3	1.79	0.63
1:B:876:LYS:HE3	1:B:1014:LYS:HB3	1.81	0.63
1:F:1514:THR:HB	1:E:2050:GLU:OE2	1.98	0.63
1:D:196:GLU:CG	1:C:2056:VAL:CG2	2.61	0.63
1:D:201:THR:HB	1:C:2124:ILE:HD12	1.79	0.63
1:B:1675:ILE:HG22	1:B:1677:PRO:HD2	1.81	0.63
1:F:2047:LEU:CD1	1:E:1360:LEU:CD2	2.77	0.63
1:D:1192:SER:HA	1:D:1211:ARG:HD2	1.81	0.63
1:D:2047:LEU:CD1	1:C:1360:LEU:CD2	2.77	0.63
1:B:674:ASN:HD22	1:E:411:ILE:CD1	2.12	0.63
1:A:1636:TRP:CE3	1:A:1685:MET:HG3	2.34	0.63
1:D:854:ARG:NH2	1:D:1348:GLU:OE1	2.32	0.62
1:B:1302:LYS:NZ	1:A:1434:ASN:HD21	1.98	0.62
1:C:114:THR:O	1:C:162:ARG:HA	1.99	0.62
1:C:411:ILE:CD1	1:A:674:ASN:HD22	2.12	0.62
1:F:2146:SER:CB	1:E:2118:ILE:N	2.62	0.62
1:B:1514:THR:HB	1:B:1517:GLU:HB2	1.81	0.62
1:C:421:THR:HG22	1:A:597:LEU:HD13	1.81	0.62
1:D:42:MET:SD	1:D:180:VAL:HG11	2.40	0.62
1:B:1251:ALA:O	1:A:1302:LYS:N	2.29	0.62
1:B:1542:VAL:HG21	1:B:1550:ILE:HD11	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:619:LEU:HD22	1:C:660:ILE:HD12	1.80	0.62
1:F:2047:LEU:HD12	1:E:1360:LEU:HD21	1.82	0.62
1:A:1250:PRO:HG3	1:A:1266:GLY:O	1.99	0.62
1:D:2047:LEU:HD12	1:C:1360:LEU:HD21	1.82	0.62
1:B:1636:TRP:CE3	1:B:1685:MET:HG3	2.34	0.62
1:F:1414:MET:HG2	1:F:1415:LYS:H	1.64	0.62
1:D:1414:MET:HG2	1:D:1415:LYS:H	1.64	0.62
1:D:2146:SER:CB	1:C:2118:ILE:N	2.62	0.62
1:B:1250:PRO:HG3	1:B:1266:GLY:O	1.99	0.62
1:F:42:MET:SD	1:F:180:VAL:HG11	2.40	0.62
1:E:114:THR:O	1:E:162:ARG:HA	1.99	0.62
1:B:722:THR:HG23	1:B:1186:VAL:HG21	1.82	0.62
1:F:1384:VAL:O	1:F:1388:ASN:ND2	2.33	0.62
1:C:952:ILE:HG12	1:C:960:ILE:HB	1.81	0.62
1:C:967:MET:HG3	1:C:1166:PRO:HA	1.82	0.62
1:A:969:VAL:HG13	1:A:1164:VAL:HG12	1.82	0.62
1:D:16:PRO:HB3	1:D:197:HIS:CD2	2.36	0.61
1:A:1183:ILE:HD11	1:A:1187:LYS:HD3	1.81	0.61
1:E:967:MET:HG3	1:E:1166:PRO:HA	1.82	0.61
1:F:1863:ILE:HG13	1:F:1866:ILE:HD11	1.83	0.61
1:E:952:ILE:HG12	1:E:960:ILE:HB	1.81	0.61
1:B:1302:LYS:N	1:A:1251:ALA:O	2.29	0.61
1:A:1514:THR:HB	1:A:1517:GLU:HB2	1.81	0.61
1:A:1675:ILE:HG22	1:A:1677:PRO:HD2	1.81	0.61
1:A:830:LEU:HD11	1:A:1392:ILE:HG23	1.82	0.61
1:B:195:ARG:HH12	1:B:204:ARG:HH22	1.48	0.61
1:A:876:LYS:HE3	1:A:1014:LYS:HB3	1.81	0.61
1:B:52:ASP:N	1:B:52:ASP:OD1	2.34	0.61
1:A:1542:VAL:HG21	1:A:1550:ILE:HD11	1.81	0.61
1:D:184:MET:O	1:D:187:VAL:HG22	2.01	0.61
1:D:197:HIS:HE1	1:C:2119:CYS:H	1.48	0.61
1:D:293:LEU:HD22	1:D:566:ARG:HD3	1.82	0.61
1:B:1434:ASN:HD21	1:A:1302:LYS:NZ	1.98	0.61
1:F:197:HIS:HE1	1:E:2119:CYS:H	1.48	0.61
1:B:597:LEU:HD13	1:E:421:THR:HG22	1.81	0.60
1:B:975:LYS:NZ	1:B:976:TRP:O	2.33	0.60
1:C:456:GLN:HA	1:C:460:GLN:HB3	1.83	0.60
1:E:763:LEU:HD11	1:E:768:TYR:HB3	1.83	0.60
1:E:1682:ALA:HA	1:E:1685:MET:HG2	1.83	0.60
1:C:763:LEU:HD11	1:C:768:TYR:HB3	1.83	0.60
1:F:164:ASP:HB3	1:E:2107:ARG:CD	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1638:TRP:HZ2	1:F:2032:ILE:HD12	1.66	0.60
1:A:975:LYS:NZ	1:A:976:TRP:O	2.33	0.60
1:C:1784:GLU:HB2	1:C:1814:LYS:HE3	1.83	0.60
1:F:16:PRO:HB3	1:F:197:HIS:CD2	2.36	0.60
1:D:1384:VAL:O	1:D:1388:ASN:ND2	2.33	0.60
1:C:184:MET:HA	1:C:187:VAL:HG22	1.83	0.60
1:C:2060:LEU:HD12	1:C:2123:VAL:HG11	1.83	0.60
1:F:293:LEU:HD22	1:F:566:ARG:HD3	1.82	0.60
1:A:722:THR:HG23	1:A:1186:VAL:HG21	1.82	0.60
1:B:631:PRO:HA	1:B:634:THR:HG22	1.84	0.60
1:B:920:SER:HA	1:B:924:ILE:HB	1.84	0.60
1:F:184:MET:O	1:F:187:VAL:HG22	2.01	0.60
1:B:1657:ASP:OD1	1:B:1657:ASP:N	2.35	0.60
1:A:1640:LYS:NZ	1:A:1839:ASP:O	2.34	0.60
1:E:1784:GLU:HB2	1:E:1814:LYS:HE3	1.83	0.60
1:D:1863:ILE:HG13	1:D:1866:ILE:HD11	1.83	0.60
1:B:830:LEU:HD11	1:B:1392:ILE:HG23	1.82	0.60
1:F:329:PRO:HB3	1:F:381:GLU:HB3	1.84	0.60
1:A:1654:TRP:HB2	1:A:1874:VAL:HG23	1.83	0.60
1:D:1638:TRP:HZ2	1:D:2032:ILE:HD12	1.66	0.60
1:D:2124:ILE:CD1	1:C:204:ARG:HH21	2.14	0.60
1:B:969:VAL:HG13	1:B:1164:VAL:HG12	1.82	0.60
1:E:182:GLN:O	1:E:186:LEU:HG	2.02	0.60
1:B:1255:GLN:HE21	1:A:1302:LYS:HZ2	1.49	0.59
1:C:182:GLN:O	1:C:186:LEU:HG	2.02	0.59
1:C:1835:THR:HB	1:C:1844:ILE:HG13	1.83	0.59
1:D:329:PRO:HB3	1:D:381:GLU:HB3	1.84	0.59
1:D:2150:PHE:CZ	1:C:2120:PRO:HA	2.37	0.59
1:F:2150:PHE:CZ	1:E:2120:PRO:HA	2.37	0.59
1:E:348:ASP:OD2	1:E:364:ASN:ND2	2.35	0.59
1:D:189:ALA:HB1	1:C:2115:ASN:HB2	1.82	0.59
1:D:195:ARG:NH2	1:C:2108:GLU:OE2	2.36	0.59
1:F:201:THR:HB	1:E:2124:ILE:HD12	1.79	0.59
1:A:1286:LYS:NZ	1:A:1461:GLU:OE1	2.34	0.59
1:E:1835:THR:HB	1:E:1844:ILE:HG13	1.83	0.59
1:B:1286:LYS:NZ	1:B:1461:GLU:OE1	2.34	0.59
1:F:722:THR:HG23	1:F:1186:VAL:HG21	1.85	0.59
1:A:1339:LYS:N	1:A:1416:VAL:O	2.35	0.59
1:A:636:LEU:HD11	1:A:1166:PRO:HD2	1.84	0.59
1:E:456:GLN:HA	1:E:460:GLN:HB3	1.83	0.59
1:B:742:HIS:HB3	1:B:1040:PHE:HZ	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1654:TRP:HB2	1:B:1874:VAL:HG23	1.83	0.59
1:C:337:MET:HE1	1:C:511:PHE:HB3	1.85	0.59
1:D:722:THR:HG23	1:D:1186:VAL:HG21	1.85	0.59
1:C:1682:ALA:HA	1:C:1685:MET:HG2	1.83	0.59
1:B:861:HIS:HA	1:B:1376:ARG:HG2	1.84	0.59
1:C:421:THR:HG22	1:A:597:LEU:HD12	1.79	0.59
1:D:340:ARG:NH1	1:D:372:LYS:O	2.36	0.59
1:F:1514:THR:CG2	1:E:2050:GLU:OE2	2.51	0.59
1:A:195:ARG:HH12	1:A:204:ARG:HH22	1.48	0.59
1:A:920:SER:HA	1:A:924:ILE:HB	1.84	0.59
1:E:184:MET:HA	1:E:187:VAL:HG22	1.83	0.59
1:D:1514:THR:CG2	1:C:2050:GLU:OE2	2.51	0.58
1:E:2060:LEU:HD12	1:E:2123:VAL:HG11	1.83	0.58
1:D:954:LEU:HB2	1:D:958:LYS:HB2	1.85	0.58
1:F:487:ILE:HG21	1:F:1407:ARG:HE	1.68	0.58
1:B:1251:ALA:O	1:A:1301:GLN:HA	2.03	0.58
1:A:631:PRO:HA	1:A:634:THR:HG22	1.84	0.58
1:A:742:HIS:HB3	1:A:1040:PHE:HZ	1.67	0.58
1:D:196:GLU:CG	1:C:2056:VAL:HG21	2.16	0.58
1:F:51:LYS:NZ	1:F:99:TYR:O	2.33	0.58
1:F:340:ARG:NH1	1:F:372:LYS:O	2.36	0.58
1:E:337:MET:HE1	1:E:511:PHE:HB3	1.85	0.58
1:B:66:VAL:HG22	1:B:70:ILE:HD11	1.86	0.58
1:A:1700:ALA:HA	1:A:1704:ALA:HB3	1.85	0.58
1:B:1301:GLN:HA	1:A:1251:ALA:O	2.03	0.58
1:A:923:TYR:HE1	1:A:1074:LEU:HD11	1.69	0.58
1:D:1364:GLN:OE1	1:C:2047:LEU:CA	2.52	0.58
1:A:52:ASP:OD1	1:A:52:ASP:N	2.34	0.58
1:B:329:PRO:HA	1:B:332:TYR:HD2	1.69	0.58
1:B:836:GLN:O	1:B:838:GLN:NE2	2.36	0.58
1:F:195:ARG:NH2	1:E:2108:GLU:OE2	2.36	0.58
1:F:205:ALA:HB2	1:E:2052:VAL:CG2	2.24	0.58
1:F:599:TYR:HB2	1:F:707:ARG:HH22	1.69	0.58
1:B:118:ASP:OD1	1:B:119:LYS:N	2.37	0.58
1:B:636:LEU:HD11	1:B:1166:PRO:HD2	1.84	0.58
1:B:742:HIS:HB3	1:B:1040:PHE:CZ	2.39	0.58
1:C:348:ASP:OD2	1:C:364:ASN:ND2	2.35	0.58
1:C:985:PHE:O	1:C:989:THR:HG22	2.04	0.58
1:F:2124:ILE:CD1	1:E:204:ARG:HH21	2.14	0.58
1:B:670:ALA:HB1	1:E:411:ILE:HG13	1.85	0.58
1:B:1302:LYS:HZ2	1:A:1255:GLN:HE21	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:882:VAL:HG12	1:C:896:ILE:HG23	1.86	0.58
1:A:136:GLU:OE1	1:A:154:ILE:N	2.34	0.58
1:A:861:HIS:HA	1:A:1376:ARG:HG2	1.84	0.58
1:C:411:ILE:HG13	1:A:670:ALA:HB1	1.85	0.57
1:F:972:ASP:HA	1:F:1099:ASP:HA	1.86	0.57
1:A:980:ASP:OD1	1:A:984:LYS:NZ	2.37	0.57
1:F:884:LYS:HB2	1:F:887:ARG:HD3	1.85	0.57
1:F:954:LEU:HB2	1:F:958:LYS:HB2	1.85	0.57
1:A:1192:SER:HA	1:A:1211:ARG:HD3	1.86	0.57
1:C:117:VAL:HG13	1:C:160:ALA:HB3	1.87	0.57
1:B:1339:LYS:N	1:B:1416:VAL:O	2.35	0.57
1:F:792:LEU:O	1:F:796:GLU:HG2	2.04	0.57
1:A:66:VAL:HG22	1:A:70:ILE:HD11	1.86	0.57
1:A:119:LYS:HA	1:A:122:ARG:HE	1.70	0.57
1:B:923:TYR:HE1	1:B:1074:LEU:HD11	1.69	0.57
1:B:1192:SER:HA	1:B:1211:ARG:HD3	1.86	0.57
1:C:579:ILE:HD12	1:C:1193:LEU:HD11	1.85	0.57
1:D:487:ILE:HG21	1:D:1407:ARG:HE	1.68	0.57
1:D:972:ASP:HA	1:D:1099:ASP:HA	1.86	0.57
1:B:379:ARG:NH2	1:B:381:GLU:OE2	2.37	0.57
1:C:690:VAL:HG11	1:C:943:LEU:HD22	1.87	0.57
1:A:118:ASP:OD1	1:A:119:LYS:N	2.37	0.57
1:D:17:GLY:HA2	1:D:199:ILE:O	2.05	0.57
1:D:599:TYR:HB2	1:D:707:ARG:HH22	1.69	0.57
1:D:884:LYS:HB2	1:D:887:ARG:HD3	1.85	0.57
1:B:1700:ALA:HA	1:B:1704:ALA:HB3	1.85	0.57
1:F:196:GLU:CG	1:E:2056:VAL:HG21	2.16	0.57
1:F:1364:GLN:OE1	1:E:2047:LEU:CA	2.52	0.57
1:A:562:ILE:HD11	1:A:567:LEU:HD13	1.87	0.57
1:A:820:PRO:HB2	1:A:823:SER:HB3	1.87	0.57
1:D:1360:LEU:CD2	1:C:2047:LEU:CD1	2.80	0.57
1:A:329:PRO:HA	1:A:332:TYR:HD2	1.69	0.57
1:B:562:ILE:HD11	1:B:567:LEU:HD13	1.87	0.57
1:B:980:ASP:OD1	1:B:984:LYS:NZ	2.37	0.57
1:F:189:ALA:HB1	1:E:2115:ASN:HB2	1.82	0.57
1:A:836:GLN:O	1:A:838:GLN:NE2	2.36	0.57
1:E:728:GLU:HG3	1:E:730:GLY:H	1.69	0.57
1:E:842:HIS:CG	1:E:1021:ARG:HE	2.22	0.57
1:D:792:LEU:O	1:D:796:GLU:HG2	2.04	0.57
1:B:119:LYS:HA	1:B:122:ARG:HE	1.70	0.57
1:B:121:ILE:O	1:B:125:LYS:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:205:ALA:HB2	1:C:2052:VAL:CG2	2.24	0.56
1:D:1514:THR:OG1	1:D:1517:GLU:CG	2.53	0.56
1:C:621:ALA:O	1:C:625:ASN:ND2	2.37	0.56
1:C:986:ARG:HD3	1:C:1010:LYS:HG3	1.87	0.56
1:F:1360:LEU:CD2	1:E:2047:LEU:CD1	2.80	0.56
1:C:728:GLU:HG3	1:C:730:GLY:H	1.69	0.56
1:A:121:ILE:O	1:A:125:LYS:HB2	2.04	0.56
1:A:742:HIS:HB3	1:A:1040:PHE:CZ	2.39	0.56
1:A:1186:VAL:HG22	1:A:1190:LEU:HD23	1.87	0.56
1:A:1658:LYS:HD2	1:A:1662:GLU:HB3	1.87	0.56
1:E:882:VAL:HG12	1:E:896:ILE:HG23	1.86	0.56
1:D:1514:THR:OG1	1:D:1517:GLU:HG3	2.06	0.56
1:B:2110:GLN:HA	1:A:2151:TYR:OH	2.05	0.56
1:C:511:PHE:HB2	1:C:528:ILE:HG23	1.86	0.56
1:C:842:HIS:CG	1:C:1021:ARG:HE	2.22	0.56
1:C:1078:GLN:OE1	1:C:1082:ASN:ND2	2.37	0.56
1:F:17:GLY:HA2	1:F:199:ILE:O	2.05	0.56
1:F:1514:THR:OG1	1:F:1517:GLU:CG	2.53	0.56
1:A:379:ARG:NH2	1:A:381:GLU:OE2	2.37	0.56
1:A:1657:ASP:N	1:A:1657:ASP:OD1	2.35	0.56
1:E:985:PHE:O	1:E:989:THR:HG22	2.04	0.56
1:D:288:PRO:HB3	1:D:405:LEU:HD21	1.86	0.56
1:E:579:ILE:HD12	1:E:1193:LEU:HD11	1.85	0.56
1:D:649:GLU:HG3	1:D:650:ARG:HG3	1.88	0.56
1:B:1255:GLN:HE21	1:A:1302:LYS:NZ	2.03	0.56
1:F:288:PRO:HB3	1:F:405:LEU:HD21	1.86	0.56
1:F:1514:THR:OG1	1:F:1517:GLU:HG3	2.06	0.56
1:A:1453:LEU:HA	1:A:1457:THR:HG22	1.87	0.56
1:E:117:VAL:HG13	1:E:160:ALA:HB3	1.87	0.56
1:E:929:GLU:O	1:E:931:LYS:HG3	2.06	0.56
1:B:820:PRO:HB2	1:B:823:SER:HB3	1.87	0.56
1:B:1302:LYS:NZ	1:A:1255:GLN:HE21	2.03	0.56
1:C:407:ILE:O	1:C:413:GLN:NE2	2.39	0.56
1:C:2057:ASN:HA	1:C:2060:LEU:HG	1.88	0.56
1:E:511:PHE:HB2	1:E:528:ILE:HG23	1.86	0.56
1:E:621:ALA:O	1:E:625:ASN:ND2	2.37	0.56
1:B:1658:LYS:HD2	1:B:1662:GLU:HB3	1.87	0.56
1:B:2151:TYR:OH	1:A:2110:GLN:HA	2.05	0.56
1:A:229:ASP:OD1	1:A:1000:LYS:NZ	2.38	0.56
1:E:2057:ASN:HA	1:E:2060:LEU:HG	1.88	0.56
1:D:546:ILE:HD11	1:D:553:GLN:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1084:PHE:HZ	1:D:1134:VAL:HG21	1.71	0.56
1:B:1640:LYS:NZ	1:B:1839:ASP:O	2.34	0.56
1:F:193:TYR:CG	1:E:2116:LYS:HD3	2.40	0.56
1:E:690:VAL:HG11	1:E:943:LEU:HD22	1.87	0.56
1:B:1453:LEU:HA	1:B:1457:THR:HG22	1.87	0.56
1:F:11:LEU:HD13	1:F:194:VAL:HG21	1.88	0.56
1:F:1084:PHE:HZ	1:F:1134:VAL:HG21	1.71	0.56
1:A:355:PRO:HD2	1:A:358:GLN:HG3	1.88	0.56
1:B:707:ARG:CB	1:E:417:VAL:HG11	2.19	0.56
1:F:381:GLU:O	1:F:385:MET:HG2	2.06	0.56
1:D:193:TYR:CG	1:C:2116:LYS:HD3	2.40	0.55
1:D:2147:ILE:CD1	1:C:2114:VAL:HG13	2.35	0.55
1:B:356:ARG:NH1	1:B:367:GLU:OE1	2.39	0.55
1:C:490:SER:HB2	1:C:518:LEU:HB2	1.87	0.55
1:C:1764:LYS:HA	1:C:1767:MET:SD	2.46	0.55
1:A:194:VAL:HG22	1:A:198:LEU:HD12	1.88	0.55
1:E:329:PRO:HB2	1:E:385:MET:HB2	1.88	0.55
1:E:883:ARG:HG3	1:E:884:LYS:H	1.71	0.55
1:E:2061:MET:N	1:E:2061:MET:SD	2.79	0.55
1:D:381:GLU:O	1:D:385:MET:HG2	2.06	0.55
1:B:2095:GLY:HA2	1:B:2098:VAL:HG22	1.88	0.55
1:C:929:GLU:O	1:C:931:LYS:HG3	2.06	0.55
1:F:649:GLU:HG3	1:F:650:ARG:HG3	1.88	0.55
1:B:880:ARG:NH1	1:B:881:ILE:O	2.40	0.55
1:B:971:ALA:HA	1:B:1162:THR:HG22	1.88	0.55
1:B:1186:VAL:HG22	1:B:1190:LEU:HD23	1.87	0.55
1:C:1544:ARG:HD2	1:C:1545:GLU:HG3	1.89	0.55
1:C:2061:MET:SD	1:C:2061:MET:N	2.79	0.55
1:F:2139:ARG:NH2	1:E:2121:GLU:OE2	2.39	0.55
1:D:164:ASP:HB3	1:C:2107:ARG:CD	2.30	0.55
1:D:2122:ASP:OD2	1:C:16:PRO:HB2	2.06	0.55
1:B:194:VAL:HG22	1:B:198:LEU:HD12	1.88	0.55
1:B:2132:ARG:HH11	1:B:2132:ARG:HB2	1.71	0.55
1:C:329:PRO:HB2	1:C:385:MET:HB2	1.88	0.55
1:C:1845:ALA:HB2	1:C:1856:LEU:HD22	1.89	0.55
1:F:459:THR:OG1	1:F:1223:GLN:OE1	2.25	0.55
1:A:356:ARG:NH1	1:A:367:GLU:OE1	2.39	0.55
1:E:36:HIS:NE2	1:E:111:VAL:O	2.36	0.55
1:E:490:SER:HB2	1:E:518:LEU:HB2	1.87	0.55
1:D:876:LYS:HE3	1:D:1014:LYS:HB3	1.89	0.55
1:B:136:GLU:OE1	1:B:154:ILE:N	2.34	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:229:ASP:OD1	1:B:1000:LYS:NZ	2.38	0.55
1:F:1115:ASP:OD1	1:F:1116:TRP:N	2.40	0.55
1:E:1509:TYR:HD2	1:E:1535:LEU:HD12	1.72	0.55
1:B:674:ASN:ND2	1:E:411:ILE:HD13	2.22	0.55
1:C:417:VAL:HG11	1:A:707:ARG:CB	2.19	0.55
1:C:584:TRP:NE1	1:C:719:GLU:OE2	2.39	0.55
1:E:407:ILE:O	1:E:413:GLN:NE2	2.39	0.55
1:B:812:ILE:O	1:B:817:TRP:NE1	2.34	0.55
1:F:2146:SER:CB	1:E:2117:GLY:CA	2.80	0.55
1:A:880:ARG:NH1	1:A:881:ILE:O	2.40	0.55
1:A:971:ALA:HA	1:A:1162:THR:HG22	1.88	0.55
1:A:1945:SER:OG	1:A:1946:GLY:N	2.39	0.55
1:E:833:MET:HG2	1:E:851:GLU:HG3	1.89	0.55
1:E:986:ARG:HD3	1:E:1010:LYS:HG3	1.87	0.55
1:E:1078:GLN:OE1	1:E:1082:ASN:ND2	2.37	0.55
1:B:1554:ASP:OD1	1:B:1554:ASP:N	2.39	0.55
1:D:2139:ARG:NH2	1:C:2121:GLU:OE2	2.39	0.55
1:B:1544:ARG:NH1	1:B:1545:GLU:OE2	2.40	0.55
1:F:189:ALA:CA	1:E:2112:MET:HA	2.37	0.55
1:A:925:SER:HG	1:A:932:ILE:N	2.05	0.55
1:E:1262:PRO:HB2	1:E:1265:LEU:HD12	1.89	0.55
1:C:883:ARG:HG3	1:C:884:LYS:H	1.71	0.55
1:C:1419:LEU:HG	1:C:1420:ASP:H	1.72	0.55
1:C:1509:TYR:HD2	1:C:1535:LEU:HD12	1.72	0.55
1:C:1789:VAL:HG12	1:C:1791:HIS:H	1.72	0.55
1:A:1115:ASP:OD1	1:A:1115:ASP:N	2.40	0.55
1:A:1544:ARG:NH1	1:A:1545:GLU:OE2	2.40	0.55
1:E:1764:LYS:HA	1:E:1767:MET:SD	2.46	0.55
1:B:148:ILE:HG13	1:B:149:PRO:HD2	1.90	0.54
1:F:546:ILE:HD11	1:F:553:GLN:HB3	1.87	0.54
1:F:2122:ASP:OD2	1:E:16:PRO:HB2	2.06	0.54
1:A:1076:PHE:HD1	1:A:1149:ILE:HD11	1.72	0.54
1:A:2095:GLY:HA2	1:A:2098:VAL:HG22	1.88	0.54
1:E:1926:LEU:HD21	1:E:2076:VAL:HG21	1.88	0.54
1:B:355:PRO:HD2	1:B:358:GLN:HG3	1.88	0.54
1:B:925:SER:HG	1:B:932:ILE:N	2.05	0.54
1:C:1659:THR:HG23	1:C:1662:GLU:H	1.72	0.54
1:F:1650:PHE:CD1	1:F:1660:PHE:HB3	2.43	0.54
1:A:1844:ILE:HG22	1:A:1855:LEU:HA	1.89	0.54
1:A:2108:GLU:O	1:A:2112:MET:HG2	2.08	0.54
1:E:1419:LEU:HG	1:E:1420:ASP:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1890:PRO:HB2	1:E:1916:ILE:HD11	1.89	0.54
1:E:2135:MET:SD	1:E:2135:MET:N	2.81	0.54
1:D:912:TYR:HA	1:D:915:ILE:HG22	1.89	0.54
1:C:36:HIS:NE2	1:C:111:VAL:O	2.36	0.54
1:C:1926:LEU:HD21	1:C:2076:VAL:HG21	1.88	0.54
1:C:2135:MET:N	1:C:2135:MET:SD	2.81	0.54
1:D:11:LEU:HD13	1:D:194:VAL:HG21	1.88	0.54
1:D:459:THR:OG1	1:D:1223:GLN:OE1	2.25	0.54
1:D:2095:GLY:O	1:D:2099:ILE:HG12	2.07	0.54
1:C:411:ILE:HD13	1:A:674:ASN:ND2	2.22	0.54
1:F:876:LYS:HE3	1:F:1014:LYS:HB3	1.89	0.54
1:F:1364:GLN:OE1	1:E:2047:LEU:HB2	2.08	0.54
1:A:148:ILE:HG13	1:A:149:PRO:HD2	1.90	0.54
1:D:1084:PHE:HB3	1:D:1087:LEU:HB2	1.90	0.54
1:D:1254:LEU:HD11	1:D:1265:LEU:HD23	1.90	0.54
1:B:1192:SER:O	1:B:1192:SER:OG	2.25	0.54
1:C:2100:ASP:OD1	1:C:2100:ASP:N	2.40	0.54
1:F:912:TYR:HA	1:F:915:ILE:HG22	1.89	0.54
1:E:1845:ALA:HB2	1:E:1856:LEU:HD22	1.89	0.54
1:E:1912:ALA:HA	1:E:1915:LEU:HD23	1.88	0.54
1:F:533:ILE:HD12	1:F:540:LYS:HE2	1.90	0.54
1:D:192:SER:HA	1:D:195:ARG:CZ	2.38	0.54
1:D:1364:GLN:OE1	1:C:2047:LEU:HB2	2.08	0.54
1:D:1617:LYS:O	1:D:1620:ILE:HG13	2.08	0.54
1:B:1945:SER:OG	1:B:1946:GLY:N	2.39	0.54
1:C:288:PRO:HB3	1:C:405:LEU:HD21	1.90	0.54
1:F:246:TYR:CD1	1:F:774:ARG:HG2	2.43	0.54
1:F:2095:GLY:O	1:F:2099:ILE:HG12	2.07	0.54
1:A:1686:ILE:O	1:A:1690:LYS:HB3	2.08	0.54
1:E:1544:ARG:HD2	1:E:1545:GLU:HG3	1.89	0.54
1:E:1697:GLN:NE2	1:E:1832:PHE:O	2.41	0.54
1:E:1943:ASP:N	1:E:1943:ASP:OD1	2.36	0.54
1:D:1115:ASP:OD1	1:D:1116:TRP:N	2.40	0.54
1:B:456:GLN:HA	1:B:460:GLN:HB3	1.90	0.54
1:B:2108:GLU:O	1:B:2112:MET:HG2	2.08	0.54
1:A:798:ASN:HA	1:A:801:LEU:HB2	1.90	0.54
1:E:562:ILE:HD11	1:E:567:LEU:HD13	1.89	0.54
1:D:533:ILE:HD12	1:D:540:LYS:HE2	1.90	0.54
1:B:798:ASN:HA	1:B:801:LEU:HB2	1.90	0.54
1:B:1076:PHE:HD1	1:B:1149:ILE:HD11	1.72	0.54
1:C:581:THR:HG23	1:C:604:VAL:HG23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1912:ALA:HA	1:C:1915:LEU:HD23	1.88	0.54
1:F:39:VAL:O	1:F:42:MET:HG2	2.08	0.54
1:E:581:THR:HG23	1:E:604:VAL:HG23	1.90	0.54
1:E:634:THR:HG21	1:E:713:TYR:CE2	2.43	0.54
1:D:189:ALA:CA	1:C:2112:MET:HA	2.37	0.54
1:F:1254:LEU:HD11	1:F:1265:LEU:HD23	1.90	0.54
1:F:1617:LYS:O	1:F:1620:ILE:HG13	2.08	0.54
1:A:456:GLN:HA	1:A:460:GLN:HB3	1.90	0.54
1:E:1472:HIS:HB3	1:E:1602:LYS:HB3	1.90	0.54
1:C:562:ILE:HD11	1:C:567:LEU:HD13	1.89	0.53
1:C:694:THR:HG22	1:C:695:VAL:H	1.73	0.53
1:C:770:MET:HG3	1:C:774:ARG:HD2	1.91	0.53
1:C:1890:PRO:HB2	1:C:1916:ILE:HD11	1.89	0.53
1:E:1705:TYR:HB2	1:E:1736:GLY:H	1.73	0.53
1:D:362:THR:OG1	1:D:365:VAL:O	2.22	0.53
1:D:456:GLN:HA	1:D:460:GLN:HB3	1.89	0.53
1:D:1697:GLN:NE2	1:D:1832:PHE:O	2.41	0.53
1:B:334:ILE:HG23	1:B:511:PHE:CZ	2.44	0.53
1:C:833:MET:HG2	1:C:851:GLU:HG3	1.89	0.53
1:C:1705:TYR:HB2	1:C:1736:GLY:H	1.73	0.53
1:A:1135:ASN:N	1:A:1135:ASN:OD1	2.42	0.53
1:A:1192:SER:OG	1:A:1192:SER:O	2.25	0.53
1:E:366:ARG:HH21	1:E:372:LYS:HD2	1.74	0.53
1:D:246:TYR:CD1	1:D:774:ARG:HG2	2.43	0.53
1:D:2146:SER:CB	1:C:2117:GLY:CA	2.80	0.53
1:B:1538:MET:HA	1:B:1614:PHE:CE2	2.44	0.53
1:C:366:ARG:HH21	1:C:372:LYS:HD2	1.74	0.53
1:C:1696:LEU:HD22	1:C:1856:LEU:HD21	1.91	0.53
1:F:192:SER:HA	1:F:195:ARG:CZ	2.38	0.53
1:A:1123:GLN:OE1	1:A:1128:HIS:ND1	2.41	0.53
1:D:1493:ARG:NH1	1:D:1565:LYS:HB3	2.24	0.53
1:B:184:MET:HA	1:B:187:VAL:HG22	1.90	0.53
1:B:1686:ILE:O	1:B:1690:LYS:HB3	2.08	0.53
1:C:707:ARG:HH22	1:A:428:GLU:HB3	1.73	0.53
1:F:1650:PHE:HD1	1:F:1660:PHE:HB3	1.73	0.53
1:F:1697:GLN:NE2	1:F:1832:PHE:O	2.41	0.53
1:A:977:SER:OG	1:A:980:ASP:OD2	2.27	0.53
1:E:2034:GLU:HG3	1:E:2037:ARG:HH21	1.73	0.53
1:B:1106:TYR:HB2	1:B:1138:MET:SD	2.49	0.53
1:C:1697:GLN:NE2	1:C:1832:PHE:O	2.41	0.53
1:A:1106:TYR:HB2	1:A:1138:MET:SD	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2150:PHE:CD2	1:C:2113:VAL:HG23	2.44	0.53
1:B:428:GLU:HB3	1:E:707:ARG:HH22	1.73	0.53
1:B:584:TRP:NE1	1:B:710:TYR:OH	2.41	0.53
1:B:873:ARG:NE	1:B:1007:ASP:OD2	2.39	0.53
1:C:1262:PRO:HB2	1:C:1265:LEU:HD12	1.89	0.53
1:F:456:GLN:HA	1:F:460:GLN:HB3	1.89	0.53
1:F:1084:PHE:HB3	1:F:1087:LEU:HB2	1.90	0.53
1:F:1654:TRP:N	1:F:1872:ASP:O	2.39	0.53
1:E:1915:LEU:HD12	1:E:1919:ARG:HD3	1.91	0.53
1:E:2100:ASP:OD1	1:E:2100:ASP:N	2.40	0.53
1:D:39:VAL:O	1:D:42:MET:HG2	2.08	0.53
1:D:1522:LEU:HD22	1:D:1528:PRO:HB3	1.91	0.53
1:D:1650:PHE:CD1	1:D:1660:PHE:HB3	2.43	0.53
1:B:1365:HIS:O	1:B:1367:THR:N	2.41	0.53
1:B:1844:ILE:HG22	1:B:1855:LEU:HA	1.89	0.53
1:F:1364:GLN:OE1	1:E:2047:LEU:CB	2.57	0.53
1:A:19:LEU:HD12	1:A:198:LEU:HB3	1.91	0.53
1:A:1554:ASP:OD1	1:A:1554:ASP:N	2.39	0.53
1:A:1881:HIS:O	1:A:1884:VAL:HG12	2.09	0.53
1:E:694:THR:HG22	1:E:695:VAL:H	1.73	0.53
1:E:1034:ASP:O	1:E:1038:LYS:HB2	2.09	0.53
1:D:182:GLN:O	1:D:186:LEU:CD1	2.57	0.53
1:D:1650:PHE:HD1	1:D:1660:PHE:HB3	1.73	0.53
1:C:2034:GLU:HG3	1:C:2037:ARG:HH21	1.73	0.53
1:E:770:MET:HG3	1:E:774:ARG:HD2	1.91	0.53
1:C:204:ARG:O	1:C:208:GLU:HG2	2.08	0.53
1:F:2150:PHE:CD2	1:E:2113:VAL:HG23	2.44	0.53
1:A:1116:TRP:NE1	1:A:1135:ASN:O	2.39	0.53
1:E:204:ARG:O	1:E:208:GLU:HG2	2.08	0.53
1:B:127:LYS:HG3	1:B:128:TYR:CD1	2.40	0.53
1:B:1135:ASN:OD1	1:B:1135:ASN:N	2.42	0.53
1:B:1930:ASN:HA	1:B:1933:LEU:HD12	1.91	0.53
1:C:20:THR:HG22	1:C:21:ALA:H	1.74	0.53
1:C:1472:HIS:HB3	1:C:1602:LYS:HB3	1.90	0.53
1:C:1796:LYS:HB2	1:C:1813:TYR:HE1	1.74	0.53
1:F:1550:ILE:HG22	1:F:1559:ILE:HD11	1.91	0.53
1:A:341:TYR:HH	1:A:353:TYR:HH	1.56	0.53
1:A:1538:MET:HA	1:A:1614:PHE:CE2	2.44	0.53
1:E:1659:THR:HG23	1:E:1662:GLU:H	1.72	0.53
1:D:1364:GLN:OE1	1:C:2047:LEU:CB	2.57	0.52
1:B:1835:THR:HB	1:B:1844:ILE:HG13	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1298:HIS:CE1	1:F:1299:LYS:HB2	2.44	0.52
1:F:2147:ILE:CD1	1:E:2114:VAL:HG13	2.35	0.52
1:A:334:ILE:HG23	1:A:511:PHE:CZ	2.44	0.52
1:A:1675:ILE:O	1:A:1679:ILE:HG13	2.09	0.52
1:E:288:PRO:HB3	1:E:405:LEU:HD21	1.90	0.52
1:E:584:TRP:NE1	1:E:719:GLU:OE2	2.39	0.52
1:B:1123:GLN:OE1	1:B:1128:HIS:ND1	2.41	0.52
1:C:1:MET:HG2	1:C:38:ILE:HG22	1.91	0.52
1:C:927:GLY:HA2	1:C:931:LYS:HE2	1.91	0.52
1:E:1789:VAL:HG12	1:E:1791:HIS:H	1.72	0.52
1:C:634:THR:HG21	1:C:713:TYR:CE2	2.43	0.52
1:C:1034:ASP:O	1:C:1038:LYS:HB2	2.09	0.52
1:A:142:PHE:HE1	1:A:147:GLU:HB3	1.75	0.52
1:A:182:GLN:O	1:A:186:LEU:HG	2.09	0.52
1:D:1297:SER:O	1:D:1299:LYS:N	2.43	0.52
1:D:1514:THR:HG1	1:D:1517:GLU:CD	2.13	0.52
1:D:2063:ARG:HG2	1:C:2150:PHE:CE1	2.45	0.52
1:F:2063:ARG:HG2	1:E:2150:PHE:CE1	2.45	0.52
1:A:1217:ASP:HB2	1:A:1572:VAL:HG12	1.91	0.52
1:A:1365:HIS:O	1:A:1367:THR:N	2.41	0.52
1:A:1835:THR:HB	1:A:1844:ILE:HG13	1.91	0.52
1:B:1633:ILE:HD13	1:B:1685:MET:SD	2.50	0.52
1:F:764:VAL:HG22	1:F:784:LEU:HD21	1.91	0.52
1:A:584:TRP:NE1	1:A:710:TYR:OH	2.41	0.52
1:E:1696:LEU:HD22	1:E:1856:LEU:HD21	1.91	0.52
1:D:429:LEU:O	1:D:471:THR:OG1	2.24	0.52
1:D:1298:HIS:CE1	1:D:1299:LYS:HB2	2.44	0.52
1:B:19:LEU:HD12	1:B:198:LEU:HB3	1.91	0.52
1:B:1659:THR:HG22	1:B:1662:GLU:HG3	1.92	0.52
1:F:182:GLN:O	1:F:186:LEU:CD1	2.57	0.52
1:F:189:ALA:HB3	1:E:2115:ASN:HB2	1.86	0.52
1:A:1659:THR:HG22	1:A:1662:GLU:HG3	1.92	0.52
1:E:20:THR:HG22	1:E:21:ALA:H	1.74	0.52
1:E:836:GLN:OE1	1:E:854:ARG:NH1	2.43	0.52
1:D:764:VAL:HG22	1:D:784:LEU:HD21	1.91	0.52
1:D:1514:THR:HG22	1:C:2050:GLU:CD	2.30	0.52
1:B:809:ALA:HB2	1:B:995:GLY:HA3	1.92	0.52
1:B:2115:ASN:OD1	1:B:2116:LYS:N	2.43	0.52
1:C:931:LYS:HD2	1:C:932:ILE:HG13	1.91	0.52
1:F:524:PHE:HB3	1:F:561:SER:HB2	1.91	0.52
1:F:1368:TYR:OH	1:F:1516:GLU:OE1	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1509:TYR:CD2	1:E:1535:LEU:HD12	2.45	0.52
1:B:1675:ILE:O	1:B:1679:ILE:HG13	2.09	0.52
1:F:1493:ARG:NH1	1:F:1565:LYS:HB3	2.24	0.52
1:A:1930:ASN:HA	1:A:1933:LEU:HD12	1.91	0.52
1:E:927:GLY:HA2	1:E:931:LYS:HE2	1.91	0.52
1:D:1514:THR:CG2	1:C:2050:GLU:CG	2.75	0.52
1:B:1115:ASP:N	1:B:1115:ASP:OD1	2.40	0.52
1:F:2147:ILE:HG13	1:E:2114:VAL:HG22	1.91	0.52
1:E:1:MET:HG2	1:E:38:ILE:HG22	1.91	0.52
1:D:1555:VAL:O	1:D:1559:ILE:HG12	2.10	0.52
1:D:1640:LYS:NZ	1:D:1840:GLY:O	2.43	0.52
1:B:36:HIS:NE2	1:B:111:VAL:O	2.40	0.52
1:B:123:GLU:O	1:B:127:LYS:HG2	2.10	0.52
1:C:343:ASN:OD1	1:E:343:ASN:OD1	2.27	0.52
1:C:1741:ARG:NH2	1:C:1743:GLU:OE2	2.43	0.52
1:A:184:MET:HA	1:A:187:VAL:HG22	1.90	0.52
1:A:1633:ILE:HD13	1:A:1685:MET:SD	2.50	0.52
1:E:1741:ARG:NH2	1:E:1743:GLU:OE2	2.43	0.52
1:D:1928:MET:HB3	1:D:2095:GLY:HA3	1.93	0.51
1:C:792:LEU:O	1:C:796:GLU:HG2	2.10	0.51
1:F:189:ALA:CB	1:E:2112:MET:HA	2.40	0.51
1:A:429:LEU:O	1:A:471:THR:OG1	2.26	0.51
1:E:1796:LYS:HB2	1:E:1813:TYR:HE1	1.74	0.51
1:D:1405:ARG:O	1:D:1409:GLN:HG2	2.10	0.51
1:C:42:MET:SD	1:C:176:ARG:NH2	2.84	0.51
1:F:1297:SER:O	1:F:1299:LYS:N	2.43	0.51
1:F:1544:ARG:HH21	1:F:1620:ILE:HD13	1.75	0.51
1:A:117:VAL:HG13	1:A:160:ALA:HB3	1.93	0.51
1:A:127:LYS:HG3	1:A:128:TYR:CD1	2.40	0.51
1:A:1878:TRP:HB3	1:A:1885:LYS:HE2	1.93	0.51
1:A:2115:ASN:OD1	1:A:2116:LYS:N	2.43	0.51
1:E:931:LYS:HD2	1:E:932:ILE:HG13	1.91	0.51
1:E:1491:THR:O	1:E:1491:THR:OG1	2.28	0.51
1:D:189:ALA:HB3	1:C:2115:ASN:CB	2.39	0.51
1:B:117:VAL:HG13	1:B:160:ALA:HB3	1.93	0.51
1:B:142:PHE:HE1	1:B:147:GLU:HB3	1.75	0.51
1:B:1653:LEU:O	1:B:1659:THR:OG1	2.21	0.51
1:B:1881:HIS:O	1:B:1884:VAL:HG12	2.09	0.51
1:C:181:VAL:HA	1:C:184:MET:HG3	1.92	0.51
1:C:836:GLN:OE1	1:C:854:ARG:NH1	2.43	0.51
1:C:1915:LEU:HD12	1:C:1919:ARG:HD3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1522:LEU:HD22	1:F:1528:PRO:HB3	1.91	0.51
1:A:123:GLU:O	1:A:127:LYS:HG2	2.10	0.51
1:A:809:ALA:HB2	1:A:995:GLY:HA3	1.92	0.51
1:D:189:ALA:CB	1:C:2112:MET:HA	2.40	0.51
1:D:880:ARG:NH1	1:D:881:ILE:O	2.43	0.51
1:D:1544:ARG:NH2	1:D:1620:ILE:HD13	2.26	0.51
1:B:182:GLN:O	1:B:186:LEU:HG	2.09	0.51
1:C:1702:ARG:O	1:C:1737:LEU:N	2.41	0.51
1:F:89:LYS:HG3	1:F:93:LYS:HE3	1.93	0.51
1:F:950:SER:HB2	1:F:964:ARG:HE	1.74	0.51
1:E:42:MET:SD	1:E:176:ARG:NH2	2.84	0.51
1:D:21:ALA:O	1:D:25:ILE:HG12	2.11	0.51
1:D:950:SER:HB2	1:D:964:ARG:HE	1.74	0.51
1:C:15:SER:O	1:C:18:THR:OG1	2.29	0.51
1:C:1509:TYR:CD2	1:C:1535:LEU:HD12	2.45	0.51
1:C:1539:LYS:HA	1:C:1550:ILE:HD11	1.93	0.51
1:F:830:LEU:HD11	1:F:1392:ILE:HG23	1.93	0.51
1:F:880:ARG:NH1	1:F:881:ILE:O	2.43	0.51
1:E:868:LEU:O	1:E:872:THR:OG1	2.28	0.51
1:E:1686:ILE:HG13	1:E:1695:VAL:HG21	1.93	0.51
1:D:197:HIS:CE1	1:C:2119:CYS:H	2.28	0.51
1:D:524:PHE:HB3	1:D:561:SER:HB2	1.91	0.51
1:D:1550:ILE:HG22	1:D:1559:ILE:HD11	1.91	0.51
1:D:1620:ILE:HD12	1:D:1624:LYS:NZ	2.26	0.51
1:D:2076:VAL:HG23	1:D:2079:LEU:HD12	1.93	0.51
1:F:21:ALA:O	1:F:25:ILE:HG12	2.11	0.51
1:F:1514:THR:CG2	1:E:2050:GLU:CG	2.75	0.51
1:F:1640:LYS:NZ	1:F:1840:GLY:O	2.43	0.51
1:F:2076:VAL:HG23	1:F:2079:LEU:HD12	1.93	0.51
1:A:770:MET:HE3	1:A:774:ARG:HB2	1.93	0.51
1:E:792:LEU:O	1:E:796:GLU:HG2	2.10	0.51
1:E:1311:PHE:O	1:E:1315:MET:HG3	2.11	0.51
1:D:1368:TYR:OH	1:D:1516:GLU:OE1	2.28	0.51
1:B:1217:ASP:HB2	1:B:1572:VAL:HG12	1.91	0.51
1:C:1686:ILE:HG13	1:C:1695:VAL:HG21	1.93	0.51
1:F:2124:ILE:HB	1:E:204:ARG:HH21	1.76	0.51
1:E:429:LEU:O	1:E:471:THR:OG1	2.29	0.51
1:E:1348:GLU:HG2	1:E:1349:PHE:CD2	2.46	0.51
1:D:2147:ILE:HG13	1:C:2114:VAL:HG22	1.91	0.51
1:B:977:SER:OG	1:B:980:ASP:OD2	2.27	0.51
1:C:116:ASP:N	1:C:116:ASP:OD1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:840:ASP:N	1:C:840:ASP:OD1	2.43	0.51
1:C:1348:GLU:HG2	1:C:1349:PHE:CD2	2.46	0.51
1:C:1669:ARG:HD3	1:C:1670:VAL:HG13	1.93	0.51
1:F:105:THR:HG22	1:F:153:LYS:HB3	1.93	0.51
1:F:197:HIS:CE1	1:E:2119:CYS:H	2.28	0.51
1:F:1514:THR:HG22	1:E:2050:GLU:CD	2.30	0.51
1:A:1145:LEU:O	1:A:1149:ILE:HG12	2.11	0.51
1:A:1311:PHE:O	1:A:1315:MET:HG3	2.11	0.51
1:A:1631:LEU:HD12	1:A:1866:ILE:HG23	1.93	0.51
1:D:89:LYS:HG3	1:D:93:LYS:HE3	1.93	0.51
1:D:1339:LYS:HE2	1:D:1423:TRP:CD2	2.46	0.51
1:D:1654:TRP:N	1:D:1872:ASP:O	2.39	0.51
1:D:2147:ILE:CG1	1:C:2114:VAL:HG22	2.41	0.51
1:B:640:PHE:CD2	1:B:641:PRO:HD3	2.46	0.51
1:B:1145:LEU:O	1:B:1149:ILE:HG12	2.11	0.51
1:F:429:LEU:O	1:F:471:THR:OG1	2.24	0.51
1:F:624:ASP:OD1	1:F:627:ARG:NH2	2.43	0.51
1:F:1544:ARG:NH2	1:F:1620:ILE:HD13	2.26	0.51
1:F:2124:ILE:HD13	1:E:201:THR:HB	1.93	0.51
1:A:640:PHE:CD2	1:A:641:PRO:HD3	2.46	0.51
1:A:2064:TYR:HE2	1:A:2068:THR:HG21	1.76	0.51
1:E:1917:MET:SD	1:E:1917:MET:N	2.84	0.51
1:D:624:ASP:OD1	1:D:627:ARG:NH2	2.43	0.51
1:D:1903:ASN:HA	1:D:2038:LEU:HD11	1.93	0.51
1:B:492:LEU:HB2	1:B:519:GLU:HG3	1.94	0.51
1:D:475:ILE:O	1:D:479:ILE:HG12	2.11	0.50
1:D:786:CYS:O	1:D:790:ILE:HG12	2.11	0.50
1:D:830:LEU:HD11	1:D:1392:ILE:HG23	1.93	0.50
1:B:1138:MET:O	1:B:1141:SER:OG	2.24	0.50
1:C:935:ILE:HD11	1:C:1096:HIS:HB2	1.93	0.50
1:F:1405:ARG:O	1:F:1409:GLN:HG2	2.10	0.50
1:E:1169:ALA:O	1:E:1173:SER:OG	2.23	0.50
1:D:1544:ARG:HH21	1:D:1620:ILE:HD13	1.75	0.50
1:B:951:PHE:HE1	1:B:961:ARG:HG2	1.76	0.50
1:B:1114:THR:O	1:B:1118:LEU:N	2.40	0.50
1:C:519:GLU:OE2	1:C:1405:ARG:HG2	2.11	0.50
1:A:584:TRP:HZ2	1:A:708:ILE:HD11	1.77	0.50
1:E:935:ILE:HD11	1:E:1096:HIS:HB2	1.93	0.50
1:E:1114:THR:HA	1:E:1117:PHE:HD1	1.76	0.50
1:B:110:GLU:OE2	1:B:124:LYS:NZ	2.45	0.50
1:B:1631:LEU:HD12	1:B:1866:ILE:HG23	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2132:ARG:NH1	1:A:1438:GLU:OE2	2.45	0.50
1:C:1114:THR:HA	1:C:1117:PHE:HD1	1.76	0.50
1:C:1311:PHE:O	1:C:1315:MET:HG3	2.11	0.50
1:F:1903:ASN:HA	1:F:2038:LEU:HD11	1.93	0.50
1:F:1928:MET:HB3	1:F:2095:GLY:HA3	1.93	0.50
1:A:1138:MET:O	1:A:1141:SER:OG	2.24	0.50
1:E:181:VAL:HA	1:E:184:MET:HG3	1.92	0.50
1:E:1669:ARG:HD3	1:E:1670:VAL:HG13	1.93	0.50
1:A:2:ASP:HA	1:A:5:ARG:HG2	1.94	0.50
1:A:110:GLU:OE2	1:A:124:LYS:NZ	2.45	0.50
1:A:1114:THR:O	1:A:1118:LEU:N	2.40	0.50
1:C:626:LEU:HA	1:C:629:LEU:HB2	1.94	0.50
1:C:868:LEU:O	1:C:872:THR:OG1	2.28	0.50
1:F:1717:THR:O	1:F:1726:GLU:N	2.43	0.50
1:E:1539:LYS:HA	1:E:1550:ILE:HD11	1.93	0.50
1:C:1917:MET:N	1:C:1917:MET:SD	2.84	0.50
1:F:768:TYR:CE1	1:F:786:CYS:HB2	2.47	0.50
1:F:1339:LYS:HE2	1:F:1423:TRP:CD2	2.46	0.50
1:F:1555:VAL:O	1:F:1559:ILE:HG12	2.10	0.50
1:F:1620:ILE:HD12	1:F:1624:LYS:NZ	2.26	0.50
1:F:2147:ILE:CG1	1:E:2114:VAL:HG22	2.41	0.50
1:A:985:PHE:O	1:A:989:THR:HG22	2.12	0.50
1:D:389:LEU:HD21	1:D:559:VAL:HG11	1.93	0.50
1:B:985:PHE:O	1:B:989:THR:HG22	2.12	0.50
1:B:1301:GLN:HG2	1:A:1251:ALA:HB1	1.94	0.50
1:C:411:ILE:CD1	1:A:674:ASN:ND2	2.74	0.50
1:F:19:LEU:HD12	1:F:198:LEU:CB	2.42	0.50
1:D:1271:MET:SD	1:D:1284:SER:HB2	2.52	0.50
1:B:1836:ILE:HG23	1:B:1840:GLY:HA2	1.94	0.50
1:B:1878:TRP:HB3	1:B:1885:LYS:HE2	1.93	0.50
1:B:2064:TYR:HE2	1:B:2068:THR:HG21	1.76	0.50
1:F:28:LEU:CD2	1:F:191:ILE:HG23	2.41	0.50
1:F:189:ALA:HB3	1:E:2115:ASN:CB	2.39	0.50
1:F:884:LYS:HB2	1:F:887:ARG:HH11	1.77	0.50
1:A:110:GLU:HB3	1:A:158:VAL:HG22	1.94	0.50
1:A:812:ILE:O	1:A:817:TRP:NE1	2.34	0.50
1:A:1666:ARG:O	1:A:1670:VAL:HG12	2.12	0.50
1:E:840:ASP:N	1:E:840:ASP:OD1	2.43	0.50
1:E:1549:ASP:OD2	1:E:1551:SER:OG	2.29	0.50
1:E:1727:GLY:O	1:E:1746:TRP:NE1	2.45	0.50
1:D:884:LYS:HB2	1:D:887:ARG:HH11	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1311:PHE:O	1:B:1315:MET:HG3	2.11	0.50
1:B:1666:ARG:O	1:B:1670:VAL:HG12	2.12	0.50
1:C:584:TRP:NE1	1:C:710:TYR:OH	2.45	0.50
1:F:1254:LEU:HD23	1:F:1434:ASN:HB2	1.94	0.50
1:E:1602:LYS:O	1:E:1602:LYS:NZ	2.33	0.50
1:D:105:THR:HG22	1:D:153:LYS:HB3	1.93	0.49
1:D:2124:ILE:HD13	1:C:201:THR:HB	1.93	0.49
1:B:584:TRP:HZ2	1:B:708:ILE:HD11	1.77	0.49
1:B:1510:LYS:HB2	1:B:1535:LEU:HD13	1.94	0.49
1:F:1636:TRP:O	1:F:1640:LYS:HG2	2.12	0.49
1:A:91:PHE:CE2	1:A:131:GLY:HA3	2.47	0.49
1:A:951:PHE:HE1	1:A:961:ARG:HG2	1.76	0.49
1:A:1634:GLU:OE1	1:A:1637:ARG:NH2	2.45	0.49
1:A:1653:LEU:O	1:A:1659:THR:OG1	2.21	0.49
1:E:15:SER:O	1:E:18:THR:OG1	2.29	0.49
1:D:618:LYS:HE3	1:D:622:ILE:HD11	1.93	0.49
1:B:1634:GLU:OE1	1:B:1637:ARG:NH2	2.45	0.49
1:C:418:SER:OG	1:A:708:ILE:HA	2.12	0.49
1:F:197:HIS:ND1	1:E:2118:ILE:HG23	2.28	0.49
1:F:475:ILE:O	1:F:479:ILE:HG12	2.11	0.49
1:F:1514:THR:OG1	1:F:1517:GLU:CD	2.51	0.49
1:A:748:TRP:CD1	1:A:978:PRO:HB2	2.48	0.49
1:A:1696:LEU:HD22	1:A:1856:LEU:HD21	1.94	0.49
1:B:2052:VAL:HG11	1:A:1428:GLU:OE1	2.13	0.49
1:C:1602:LYS:O	1:C:1602:LYS:NZ	2.33	0.49
1:D:1254:LEU:HD23	1:D:1434:ASN:HB2	1.94	0.49
1:D:1636:TRP:O	1:D:1640:LYS:HG2	2.12	0.49
1:B:1253:TYR:O	1:A:1302:LYS:HD2	2.13	0.49
1:F:389:LEU:HD21	1:F:559:VAL:HG11	1.93	0.49
1:F:1706:SER:OG	1:F:1707:GLY:N	2.46	0.49
1:A:271:PHE:HB3	1:A:665:LYS:HE3	1.95	0.49
1:A:492:LEU:HB2	1:A:519:GLU:HG3	1.94	0.49
1:A:1510:LYS:HB2	1:A:1535:LEU:HD13	1.94	0.49
1:E:1702:ARG:O	1:E:1737:LEU:N	2.41	0.49
1:D:299:ILE:HG23	1:D:300:THR:HG23	1.95	0.49
1:D:2124:ILE:HB	1:C:204:ARG:HH21	1.76	0.49
1:B:530:VAL:HG13	1:B:556:VAL:HG12	1.94	0.49
1:B:968:TYR:HE2	1:B:1167:THR:HA	1.78	0.49
1:B:1438:GLU:HG2	1:B:2132:ARG:HH21	1.76	0.49
1:C:1347:PHE:HB2	1:C:1350:ALA:HB2	1.94	0.49
1:F:194:VAL:HG22	1:F:198:LEU:HD12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:299:ILE:HG23	1:F:300:THR:HG23	1.95	0.49
1:F:362:THR:OG1	1:F:365:VAL:O	2.22	0.49
1:A:16:PRO:HA	1:A:198:LEU:HD23	1.95	0.49
1:A:1942:LEU:HD23	1:A:2071:LEU:HB3	1.95	0.49
1:E:519:GLU:OE2	1:E:1405:ARG:HG2	2.11	0.49
1:E:1347:PHE:HB2	1:E:1350:ALA:HB2	1.94	0.49
1:D:768:TYR:CE1	1:D:786:CYS:HB2	2.47	0.49
1:D:1685:MET:O	1:D:1689:ILE:HG12	2.13	0.49
1:B:674:ASN:ND2	1:E:411:ILE:CD1	2.74	0.49
1:F:1271:MET:SD	1:F:1284:SER:HB2	2.52	0.49
1:F:1419:LEU:HB3	1:F:1424:VAL:HG11	1.93	0.49
1:E:584:TRP:NE1	1:E:710:TYR:OH	2.45	0.49
1:D:19:LEU:HD12	1:D:198:LEU:CB	2.42	0.49
1:D:1419:LEU:HB3	1:D:1424:VAL:HG11	1.93	0.49
1:D:2150:PHE:CE2	1:C:2118:ILE:HB	2.48	0.49
1:B:91:PHE:CE2	1:B:131:GLY:HA3	2.47	0.49
1:B:1139:TRP:HA	1:B:1142:MET:HG2	1.95	0.49
1:B:1696:LEU:HD22	1:B:1856:LEU:HD21	1.94	0.49
1:A:328:THR:O	1:A:331:SER:OG	2.24	0.49
1:A:797:LEU:HD21	1:A:1067:LEU:HD22	1.94	0.49
1:E:626:LEU:HA	1:E:629:LEU:HB2	1.94	0.49
1:B:16:PRO:HA	1:B:198:LEU:HD23	1.95	0.49
1:B:328:THR:O	1:B:331:SER:OG	2.24	0.49
1:B:429:LEU:O	1:B:471:THR:OG1	2.26	0.49
1:B:674:ASN:HD22	1:E:411:ILE:HD13	1.76	0.49
1:B:797:LEU:HD21	1:B:1067:LEU:HD22	1.94	0.49
1:B:802:ALA:O	1:B:805:SER:OG	2.31	0.49
1:F:618:LYS:HE3	1:F:622:ILE:HD11	1.93	0.49
1:A:36:HIS:NE2	1:A:111:VAL:O	2.40	0.49
1:A:530:VAL:HG13	1:A:556:VAL:HG12	1.94	0.49
1:E:637:TYR:HB2	1:E:1164:VAL:CG1	2.43	0.49
1:E:1640:LYS:NZ	1:E:1839:ASP:O	2.31	0.49
1:E:1666:ARG:O	1:E:1670:VAL:HG22	2.13	0.49
1:B:110:GLU:HB3	1:B:158:VAL:HG22	1.94	0.49
1:F:786:CYS:O	1:F:790:ILE:HG12	2.11	0.49
1:A:873:ARG:NE	1:A:1007:ASP:OD2	2.39	0.49
1:E:742:HIS:CE1	1:E:881:ILE:HD12	2.48	0.49
1:E:2144:GLN:NE2	1:E:2145:ASP:O	2.46	0.49
1:D:1514:THR:CB	1:C:2050:GLU:OE2	2.61	0.49
1:D:2047:LEU:HD23	1:D:2047:LEU:H	1.78	0.49
1:B:129:GLU:O	1:B:133:THR:OG1	2.29	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1899:ASN:HB2	1:B:2042:TRP:CZ2	2.48	0.49
1:C:1666:ARG:O	1:C:1670:VAL:HG22	2.13	0.49
1:C:2047:LEU:HD23	1:C:2047:LEU:H	1.78	0.49
1:A:1201:TYR:OH	1:A:1267:GLY:O	2.25	0.49
1:D:1056:TRP:HD1	1:D:1059:GLY:H	1.61	0.48
1:D:1514:THR:OG1	1:D:1517:GLU:CD	2.51	0.48
1:C:429:LEU:O	1:C:471:THR:OG1	2.29	0.48
1:F:2047:LEU:HD23	1:F:2047:LEU:H	1.78	0.48
1:E:2047:LEU:HD23	1:E:2047:LEU:H	1.78	0.48
1:D:28:LEU:CD2	1:D:191:ILE:HG23	2.41	0.48
1:D:923:TYR:HE2	1:D:1074:LEU:HD11	1.78	0.48
1:D:1260:ASP:OD1	1:D:1291:ARG:NH2	2.46	0.48
1:B:2:ASP:HA	1:B:5:ARG:HG2	1.94	0.48
1:B:597:LEU:HD12	1:B:599:TYR:HE1	1.78	0.48
1:B:1251:ALA:HB1	1:A:1301:GLN:HG2	1.94	0.48
1:B:2132:ARG:HB2	1:B:2132:ARG:NH1	2.29	0.48
1:C:1501:ASN:ND2	1:C:1527:PHE:O	2.41	0.48
1:F:2150:PHE:CE2	1:E:2118:ILE:HB	2.48	0.48
1:E:362:THR:O	1:E:366:ARG:NH1	2.46	0.48
1:E:756:GLU:HG2	1:E:761:GLU:HG2	1.95	0.48
1:D:16:PRO:HB2	1:C:2122:ASP:OD1	2.13	0.48
1:D:194:VAL:HG22	1:D:198:LEU:HD12	1.95	0.48
1:B:1253:TYR:O	1:A:1302:LYS:CD	2.61	0.48
1:C:319:SER:HB3	1:E:319:SER:HB3	1.95	0.48
1:C:1727:GLY:O	1:C:1746:TRP:NE1	2.45	0.48
1:F:480:ARG:CD	1:F:1238:ARG:HH12	2.24	0.48
1:F:1260:ASP:OD1	1:F:1291:ARG:NH2	2.46	0.48
1:A:77:LYS:HE2	1:A:77:LYS:HB2	1.53	0.48
1:A:1139:TRP:HA	1:A:1142:MET:HG2	1.95	0.48
1:A:1836:ILE:HG23	1:A:1840:GLY:HA2	1.94	0.48
1:D:197:HIS:ND1	1:C:2118:ILE:HG23	2.28	0.48
1:D:791:GLU:O	1:D:795:ILE:HG12	2.13	0.48
1:B:407:ILE:HD11	1:B:661:TYR:CD2	2.48	0.48
1:B:748:TRP:CD1	1:B:978:PRO:HB2	2.48	0.48
1:B:1302:LYS:HD2	1:A:1253:TYR:O	2.13	0.48
1:C:967:MET:HG3	1:C:1166:PRO:CA	2.44	0.48
1:C:1943:ASP:N	1:C:1943:ASP:OD1	2.36	0.48
1:F:16:PRO:HB2	1:E:2122:ASP:OD1	2.13	0.48
1:F:791:GLU:O	1:F:795:ILE:HG12	2.13	0.48
1:A:179:GLY:O	1:A:182:GLN:HG3	2.14	0.48
1:A:317:ALA:HB1	1:A:509:ILE:HD11	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:407:ILE:HD11	1:A:661:TYR:CD2	2.48	0.48
1:E:356:ARG:NH2	1:E:367:GLU:OE1	2.47	0.48
1:D:1201:TYR:OH	1:D:1267:GLY:O	2.29	0.48
1:B:708:ILE:HA	1:E:418:SER:OG	2.12	0.48
1:B:1428:GLU:OE1	1:A:2052:VAL:HG11	2.13	0.48
1:B:1942:LEU:HD23	1:B:2071:LEU:HB3	1.95	0.48
1:C:637:TYR:HB2	1:C:1164:VAL:CG1	2.43	0.48
1:C:1243:ALA:HB3	1:C:1246:MET:SD	2.54	0.48
1:F:923:TYR:HE2	1:F:1074:LEU:HD11	1.78	0.48
1:F:1685:MET:O	1:F:1689:ILE:HG12	2.13	0.48
1:F:2067:LYS:HZ3	1:F:2067:LYS:HB2	1.78	0.48
1:A:597:LEU:HD12	1:A:599:TYR:HE1	1.78	0.48
1:E:839:GLU:OE1	1:E:839:GLU:N	2.28	0.48
1:E:1243:ALA:HB3	1:E:1246:MET:SD	2.54	0.48
1:D:51:LYS:NZ	1:D:99:TYR:O	2.33	0.48
1:D:1458:PHE:CD2	1:D:1563:LEU:HB3	2.49	0.48
1:B:195:ARG:O	1:B:195:ARG:NH1	2.40	0.48
1:B:271:PHE:HB3	1:B:665:LYS:HE3	1.95	0.48
1:C:2139:ARG:NH2	1:C:2144:GLN:HB3	2.27	0.48
1:F:322:LEU:HD11	1:F:342:ILE:HG21	1.95	0.48
1:A:1590:LEU:O	1:A:1593:MET:HG3	2.13	0.48
1:D:1640:LYS:HD2	1:D:1646:TYR:CZ	2.48	0.48
1:B:640:PHE:CG	1:B:641:PRO:HD3	2.49	0.48
1:C:1325:GLU:OE1	1:C:1558:ARG:NH2	2.47	0.48
1:C:2144:GLN:NE2	1:C:2145:ASP:O	2.46	0.48
1:A:1070:VAL:O	1:A:1074:LEU:HD22	2.13	0.48
1:A:1899:ASN:HB2	1:A:2042:TRP:CZ2	2.48	0.48
1:E:843:LEU:HD23	1:E:880:ARG:HG2	1.96	0.48
1:D:1299:LYS:HD3	1:D:1300:ARG:N	2.28	0.48
1:D:1706:SER:OG	1:D:1707:GLY:N	2.46	0.48
1:D:2067:LYS:HZ3	1:D:2067:LYS:HB2	1.79	0.48
1:B:317:ALA:HB1	1:B:509:ILE:HD11	1.94	0.48
1:B:1302:LYS:CD	1:A:1253:TYR:O	2.61	0.48
1:C:681:SER:OG	1:C:682:LYS:N	2.47	0.48
1:F:186:LEU:HA	1:E:2115:ASN:CG	2.34	0.48
1:F:1640:LYS:HD2	1:F:1646:TYR:CZ	2.48	0.48
1:A:968:TYR:HE2	1:A:1167:THR:HA	1.78	0.48
1:A:1930:ASN:HD21	1:A:1942:LEU:HB2	1.79	0.48
1:E:52:ASP:N	1:E:52:ASP:OD1	2.45	0.48
1:E:786:CYS:O	1:E:790:ILE:HG12	2.13	0.48
1:D:322:LEU:HD11	1:D:342:ILE:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1216:LEU:HA	1:D:1220:ALA:HB3	1.96	0.48
1:B:1033:LEU:HD22	1:B:1036:HIS:CE1	2.49	0.48
1:C:356:ARG:NH2	1:C:367:GLU:OE1	2.47	0.48
1:C:967:MET:HE1	1:C:1139:TRP:CZ2	2.49	0.48
1:E:681:SER:OG	1:E:682:LYS:N	2.47	0.48
1:E:1325:GLU:OE1	1:E:1558:ARG:NH2	2.47	0.48
1:E:1553:PRO:O	1:E:1557:LYS:HB3	2.14	0.48
1:E:1698:LEU:O	1:E:1702:ARG:HG2	2.14	0.48
1:C:362:THR:O	1:C:366:ARG:NH1	2.46	0.48
1:C:861:HIS:HA	1:C:1376:ARG:HG2	1.95	0.48
1:C:1789:VAL:HB	1:C:1806:PRO:HD2	1.96	0.48
1:C:2109:ALA:HA	1:C:2112:MET:SD	2.54	0.48
1:F:1056:TRP:HD1	1:F:1059:GLY:H	1.61	0.48
1:A:192:SER:O	1:A:196:GLU:HG3	2.14	0.48
1:A:1033:LEU:HD22	1:A:1036:HIS:CE1	2.49	0.48
1:E:1789:VAL:HB	1:E:1806:PRO:HD2	1.96	0.48
1:B:1114:THR:HA	1:B:1117:PHE:HD1	1.79	0.47
1:C:1698:LEU:O	1:C:1702:ARG:HG2	2.14	0.47
1:F:19:LEU:HD12	1:F:198:LEU:HB3	1.96	0.47
1:F:1216:LEU:HA	1:F:1220:ALA:HB3	1.96	0.47
1:F:1299:LYS:HD3	1:F:1300:ARG:N	2.28	0.47
1:A:1080:TRP:HE1	1:A:1089:CYS:HB2	1.79	0.47
1:D:246:TYR:HD1	1:D:774:ARG:HG2	1.78	0.47
1:D:1843:ALA:O	1:D:1856:LEU:N	2.47	0.47
1:B:1520:ASP:O	1:B:1524:THR:HG22	2.14	0.47
1:B:1590:LEU:O	1:B:1593:MET:HG3	2.13	0.47
1:C:742:HIS:CE1	1:C:881:ILE:HD12	2.48	0.47
1:C:912:TYR:OH	1:C:989:THR:HB	2.14	0.47
1:C:1553:PRO:O	1:C:1557:LYS:HB3	2.14	0.47
1:F:1514:THR:CB	1:E:2050:GLU:OE2	2.61	0.47
1:D:1022:LYS:HZ2	1:D:1022:LYS:HB3	1.79	0.47
1:D:1222:PRO:HG2	1:D:1593:MET:HA	1.96	0.47
1:B:2083:ASP:HB2	1:B:2141:LEU:HD21	1.96	0.47
1:C:49:ASP:OD1	1:C:49:ASP:N	2.40	0.47
1:C:52:ASP:N	1:C:52:ASP:OD1	2.45	0.47
1:C:411:ILE:HD13	1:A:674:ASN:HD22	1.76	0.47
1:C:637:TYR:HB2	1:C:1164:VAL:HG13	1.96	0.47
1:C:756:GLU:HG2	1:C:761:GLU:HG2	1.95	0.47
1:F:1587:ARG:O	1:F:1591:LYS:HG3	2.14	0.47
1:A:637:TYR:HB2	1:A:1164:VAL:HG22	1.96	0.47
1:A:640:PHE:CG	1:A:641:PRO:HD3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:956:ASN:O	1:A:958:LYS:NZ	2.39	0.47
1:A:2083:ASP:HB2	1:A:2141:LEU:HD21	1.96	0.47
1:E:1503:ILE:O	1:E:1507:ILE:HG12	2.14	0.47
1:E:2109:ALA:HA	1:E:2112:MET:SD	2.54	0.47
1:D:451:LEU:HD13	1:D:1593:MET:HG2	1.96	0.47
1:D:816:ASN:HB3	1:D:819:GLU:HG3	1.96	0.47
1:D:1680:GLN:HB2	1:D:1857:ALA:HB1	1.96	0.47
1:B:179:GLY:O	1:B:182:GLN:HG3	2.14	0.47
1:B:192:SER:O	1:B:196:GLU:HG3	2.14	0.47
1:B:1297:SER:OG	1:B:1298:HIS:N	2.47	0.47
1:C:267:VAL:HG23	1:C:669:VAL:HG22	1.97	0.47
1:A:340:ARG:HD3	1:A:377:MET:SD	2.55	0.47
1:A:860:ARG:O	1:A:1376:ARG:HD3	2.14	0.47
1:B:1070:VAL:O	1:B:1074:LEU:HD22	2.13	0.47
1:B:1208:ALA:HB1	1:B:1232:CYS:HB3	1.97	0.47
1:B:2035:PRO:O	1:B:2039:ILE:HG12	2.14	0.47
1:B:2083:ASP:OD2	1:B:2140:ARG:NH1	2.41	0.47
1:C:843:LEU:HD23	1:C:880:ARG:HG2	1.96	0.47
1:F:686:LEU:HD11	1:F:939:LEU:HD23	1.97	0.47
1:F:1079:VAL:O	1:F:1083:LEU:HD23	2.14	0.47
1:E:1501:ASN:ND2	1:E:1527:PHE:O	2.41	0.47
1:B:15:SER:O	1:B:18:THR:OG1	2.33	0.47
1:F:2146:SER:HB2	1:E:2118:ILE:H	1.80	0.47
1:A:1088:ASP:OD1	1:A:1088:ASP:N	2.44	0.47
1:A:1297:SER:OG	1:A:1298:HIS:N	2.47	0.47
1:E:2139:ARG:NH2	1:E:2144:GLN:HB3	2.27	0.47
1:D:19:LEU:HD12	1:D:198:LEU:HB3	1.96	0.47
1:D:243:LEU:HD22	1:D:1079:VAL:HG21	1.96	0.47
1:D:1197:PRO:O	1:D:1394:THR:HG21	2.14	0.47
1:D:1587:ARG:O	1:D:1591:LYS:HG3	2.14	0.47
1:D:2150:PHE:CZ	1:C:2120:PRO:CA	2.97	0.47
1:B:79:ILE:HA	1:B:134:TYR:CE2	2.50	0.47
1:B:201:THR:HA	1:B:204:ARG:HD3	1.96	0.47
1:B:340:ARG:HD3	1:B:377:MET:SD	2.55	0.47
1:B:1080:TRP:HE1	1:B:1089:CYS:HB2	1.79	0.47
1:B:1302:LYS:HZ1	1:A:1434:ASN:HD21	1.59	0.47
1:B:2078:LEU:HD23	1:B:2078:LEU:H	1.80	0.47
1:F:1675:ILE:O	1:F:1679:ILE:HG12	2.15	0.47
1:F:2150:PHE:CZ	1:E:2120:PRO:CA	2.97	0.47
1:A:26:ASP:HA	1:A:29:ASP:OD2	2.14	0.47
1:A:79:ILE:HA	1:A:134:TYR:CE2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1114:THR:HA	1:A:1117:PHE:HD1	1.79	0.47
1:A:1297:SER:OG	1:A:1298:HIS:ND1	2.41	0.47
1:A:1520:ASP:O	1:A:1524:THR:HG22	2.14	0.47
1:A:2035:PRO:O	1:A:2039:ILE:HG12	2.14	0.47
1:E:637:TYR:HB2	1:E:1164:VAL:HG13	1.96	0.47
1:E:707:ARG:HA	1:E:707:ARG:HD2	1.50	0.47
1:E:748:TRP:CD1	1:E:978:PRO:HB2	2.50	0.47
1:E:861:HIS:HA	1:E:1376:ARG:HG2	1.95	0.47
1:D:1098:ASP:OD1	1:D:1098:ASP:N	2.48	0.47
1:D:1848:ASP:OD1	1:D:1851:SER:OG	2.26	0.47
1:B:26:ASP:HA	1:B:29:ASP:OD2	2.14	0.47
1:B:82:HIS:HD2	1:B:83:PRO:HD2	1.79	0.47
1:B:207:LEU:HD22	1:B:210:MET:HE1	1.97	0.47
1:B:288:PRO:HA	1:B:405:LEU:HD11	1.96	0.47
1:B:1587:ARG:HG3	1:B:1601:VAL:HG21	1.96	0.47
1:F:684:LYS:HA	1:F:689:THR:HA	1.97	0.47
1:F:816:ASN:HB3	1:F:819:GLU:HG3	1.96	0.47
1:A:240:ILE:HA	1:A:792:LEU:HD21	1.97	0.47
1:A:802:ALA:O	1:A:805:SER:OG	2.31	0.47
1:D:684:LYS:HA	1:D:689:THR:HA	1.97	0.47
1:D:742:HIS:CE1	1:D:881:ILE:HD12	2.50	0.47
1:B:1853:ARG:HD3	1:B:1853:ARG:HA	1.69	0.47
1:C:786:CYS:O	1:C:790:ILE:HG12	2.13	0.47
1:C:1549:ASP:OD2	1:C:1551:SER:OG	2.29	0.47
1:C:1763:LEU:HD13	1:C:1803:TRP:HE1	1.80	0.47
1:F:243:LEU:HD22	1:F:1079:VAL:HG21	1.96	0.47
1:F:246:TYR:HD1	1:F:774:ARG:HG2	1.78	0.47
1:F:1197:PRO:O	1:F:1394:THR:HG21	2.14	0.47
1:F:1458:PHE:CD2	1:F:1563:LEU:HB3	2.49	0.47
1:F:1702:ARG:O	1:F:1737:LEU:N	2.42	0.47
1:A:82:HIS:HD2	1:A:83:PRO:HD2	1.79	0.47
1:A:1578:VAL:HG13	1:A:1584:ALA:HB1	1.97	0.47
1:E:449:THR:OG1	1:E:450:VAL:N	2.47	0.47
1:E:1674:PRO:HA	1:E:1679:ILE:HD11	1.97	0.47
1:D:209:ALA:HB1	1:D:1522:LEU:HD12	1.97	0.47
1:C:1844:ILE:HG22	1:C:1855:LEU:HA	1.97	0.47
1:F:742:HIS:CE1	1:F:881:ILE:HD12	2.50	0.47
1:F:1222:PRO:HG2	1:F:1593:MET:HA	1.96	0.47
1:F:1249:HIS:ND1	1:F:1250:PRO:HD2	2.30	0.47
1:A:849:ILE:O	1:A:853:ILE:HD12	2.15	0.47
1:A:1638:TRP:CG	1:A:1901:MET:HG2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:480:ARG:CD	1:D:1238:ARG:HH12	2.24	0.46
1:D:912:TYR:OH	1:D:989:THR:HB	2.15	0.46
1:D:1645:PRO:HB2	1:D:1648:ASP:HB2	1.97	0.46
1:D:1675:ILE:O	1:D:1679:ILE:HG12	2.15	0.46
1:B:581:THR:HG23	1:B:604:VAL:HG23	1.97	0.46
1:B:849:ILE:O	1:B:853:ILE:HD12	2.15	0.46
1:B:1158:SER:OG	1:B:1160:LYS:O	2.33	0.46
1:B:1255:GLN:C	1:A:1303:SER:HB2	2.36	0.46
1:B:1930:ASN:HD21	1:B:1942:LEU:HB2	1.79	0.46
1:C:139:LEU:HD13	1:C:152:TYR:HB2	1.96	0.46
1:A:82:HIS:ND1	1:A:86:LYS:HB3	2.30	0.46
1:A:288:PRO:HA	1:A:405:LEU:HD11	1.96	0.46
1:E:912:TYR:OH	1:E:989:THR:HB	2.14	0.46
1:E:1035:PRO:O	1:E:1039:GLN:HG2	2.15	0.46
1:B:181:VAL:HA	1:B:184:MET:HG3	1.98	0.46
1:C:1090:PHE:CZ	1:C:1092:GLU:HG3	2.50	0.46
1:C:1503:ILE:O	1:C:1507:ILE:HG12	2.14	0.46
1:F:1640:LYS:HD2	1:F:1646:TYR:OH	2.15	0.46
1:A:1587:ARG:HG3	1:A:1601:VAL:HG21	1.96	0.46
1:E:1846:GLN:OE1	1:E:1853:ARG:NH1	2.48	0.46
1:D:186:LEU:HA	1:C:2115:ASN:CG	2.34	0.46
1:D:686:LEU:HD11	1:D:939:LEU:HD23	1.97	0.46
1:D:1249:HIS:ND1	1:D:1250:PRO:HD2	2.30	0.46
1:D:1640:LYS:HD2	1:D:1646:TYR:OH	2.15	0.46
1:C:898:THR:HG23	1:C:900:PRO:HD2	1.98	0.46
1:C:1685:MET:O	1:C:1689:ILE:HG12	2.16	0.46
1:C:2083:ASP:HB3	1:C:2137:LEU:HD11	1.97	0.46
1:F:912:TYR:OH	1:F:989:THR:HB	2.15	0.46
1:F:1634:GLU:OE1	1:F:1637:ARG:NH2	2.49	0.46
1:F:1843:ALA:O	1:F:1856:LEU:N	2.47	0.46
1:A:1530:SER:O	1:A:1530:SER:OG	2.27	0.46
1:E:139:LEU:HD13	1:E:152:TYR:HB2	1.96	0.46
1:E:1844:ILE:HG22	1:E:1855:LEU:HA	1.97	0.46
1:D:1079:VAL:O	1:D:1083:LEU:HD23	2.14	0.46
1:D:2128:LEU:O	1:D:2128:LEU:HD23	2.16	0.46
1:B:340:ARG:HD2	1:B:340:ARG:HA	1.83	0.46
1:B:1636:TRP:HH2	1:B:1684:LEU:HB3	1.80	0.46
1:C:449:THR:OG1	1:C:450:VAL:N	2.47	0.46
1:F:584:TRP:HD1	1:F:719:GLU:HG3	1.81	0.46
1:F:1451:GLN:O	1:F:1455:SER:N	2.48	0.46
1:E:267:VAL:HG23	1:E:669:VAL:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:357:ILE:HG23	1:E:358:GLN:HG3	1.98	0.46
1:E:967:MET:HE1	1:E:1139:TRP:CZ2	2.50	0.46
1:E:1919:ARG:HD2	1:E:1919:ARG:HA	1.53	0.46
1:B:329:PRO:HB2	1:B:385:MET:SD	2.56	0.46
1:B:956:ASN:O	1:B:958:LYS:NZ	2.39	0.46
1:B:1638:TRP:CD1	1:B:1901:MET:HG2	2.51	0.46
1:B:1931:ASP:O	1:B:1934:LYS:HG2	2.16	0.46
1:B:2111:ASN:HA	1:B:2114:VAL:HG22	1.97	0.46
1:C:748:TRP:CD1	1:C:978:PRO:HB2	2.50	0.46
1:C:839:GLU:H	1:C:839:GLU:CD	2.16	0.46
1:C:1674:PRO:HA	1:C:1679:ILE:HD11	1.97	0.46
1:C:1846:GLN:OE1	1:C:1853:ARG:NH1	2.48	0.46
1:F:293:LEU:HD22	1:F:566:ARG:CD	2.45	0.46
1:A:201:THR:HA	1:A:204:ARG:HD3	1.96	0.46
1:A:1636:TRP:HH2	1:A:1684:LEU:HB3	1.80	0.46
1:E:815:LYS:HA	1:E:815:LYS:HD2	1.84	0.46
1:E:1682:ALA:O	1:E:1686:ILE:HG12	2.16	0.46
1:D:1084:PHE:CZ	1:D:1134:VAL:HG21	2.51	0.46
1:D:1717:THR:O	1:D:1726:GLU:N	2.43	0.46
1:B:1116:TRP:NE1	1:B:1135:ASN:O	2.39	0.46
1:B:1434:ASN:HD21	1:A:1302:LYS:HZ1	1.62	0.46
1:C:1398:MET:HA	1:C:1403:GLN:HE22	1.81	0.46
1:F:451:LEU:HD13	1:F:1593:MET:HG2	1.96	0.46
1:F:1514:THR:CG2	1:E:2050:GLU:CD	2.84	0.46
1:F:1680:GLN:HB2	1:F:1857:ALA:HB1	1.96	0.46
1:F:2128:LEU:O	1:F:2128:LEU:HD23	2.16	0.46
1:A:207:LEU:HD22	1:A:210:MET:HE1	1.97	0.46
1:A:1158:SER:OG	1:A:1160:LYS:O	2.33	0.46
1:A:1208:ALA:HB1	1:A:1232:CYS:HB3	1.97	0.46
1:A:2111:ASN:HA	1:A:2114:VAL:HG22	1.97	0.46
1:D:2047:LEU:CD1	1:C:1360:LEU:HD23	2.46	0.46
1:D:2147:ILE:O	1:D:2151:TYR:N	2.49	0.46
1:B:77:LYS:HB2	1:B:77:LYS:HE2	1.53	0.46
1:B:637:TYR:HB2	1:B:1164:VAL:HG22	1.96	0.46
1:B:1201:TYR:OH	1:B:1267:GLY:O	2.25	0.46
1:B:1549:ASP:OD1	1:B:1551:SER:OG	2.22	0.46
1:F:1195:ASP:HB2	1:F:1398:MET:CE	2.46	0.46
1:F:1514:THR:HG1	1:F:1517:GLU:CD	2.19	0.46
1:A:3:LYS:NZ	1:A:1665:ASP:OD2	2.48	0.46
1:A:329:PRO:HB2	1:A:385:MET:SD	2.56	0.46
1:E:967:MET:HG3	1:E:1166:PRO:CA	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:9:ASN:HA	1:D:12:LYS:NZ	2.31	0.46
1:D:275:GLU:OE1	1:D:661:TYR:OH	2.32	0.46
1:D:796:GLU:HG3	1:D:1075:LEU:HA	1.98	0.46
1:D:1297:SER:HB2	1:C:1451:GLN:NE2	2.31	0.46
1:D:1514:THR:CG2	1:C:2050:GLU:CD	2.84	0.46
1:B:82:HIS:ND1	1:B:86:LYS:HB3	2.30	0.46
1:B:1084:PHE:HE1	1:B:1130:HIS:ND1	2.14	0.46
1:B:1297:SER:OG	1:B:1298:HIS:ND1	2.41	0.46
1:B:1638:TRP:CG	1:B:1901:MET:HG2	2.49	0.46
1:C:1706:SER:HA	1:C:1735:PHE:CE1	2.51	0.46
1:F:186:LEU:HD12	1:E:2115:ASN:HD21	1.81	0.46
1:A:2078:LEU:H	1:A:2078:LEU:HD23	1.80	0.46
1:E:1685:MET:O	1:E:1689:ILE:HG12	2.16	0.46
1:D:480:ARG:HD3	1:D:1238:ARG:NH1	2.30	0.46
1:D:584:TRP:HD1	1:D:719:GLU:HG3	1.81	0.46
1:B:240:ILE:HA	1:B:792:LEU:HD21	1.97	0.46
1:B:770:MET:HE3	1:B:774:ARG:HB2	1.97	0.46
1:B:860:ARG:O	1:B:1376:ARG:HD3	2.14	0.46
1:B:2120:PRO:HB3	1:A:2150:PHE:CZ	2.51	0.46
1:B:2150:PHE:CZ	1:A:2120:PRO:HB3	2.51	0.46
1:C:629:LEU:HD13	1:C:668:LEU:HD11	1.97	0.46
1:C:768:TYR:CE2	1:C:786:CYS:HB2	2.51	0.46
1:F:1457:THR:HG22	1:F:1565:LYS:HZ1	1.81	0.46
1:F:2147:ILE:O	1:F:2151:TYR:N	2.49	0.46
1:A:181:VAL:HA	1:A:184:MET:HG3	1.98	0.46
1:A:581:THR:HG23	1:A:604:VAL:HG23	1.97	0.46
1:A:600:ALA:O	1:A:604:VAL:HG13	2.16	0.46
1:A:756:GLU:OE1	1:A:761:GLU:HA	2.16	0.46
1:A:1638:TRP:CD1	1:A:1901:MET:HG2	2.51	0.46
1:D:16:PRO:HA	1:D:198:LEU:HD23	1.98	0.46
1:D:1583:GLU:HB2	1:D:1608:LEU:HD21	1.98	0.46
1:B:71:ILE:HG23	1:B:92:PHE:HE2	1.81	0.46
1:B:1351:ASP:OD1	1:B:1351:ASP:N	2.47	0.46
1:C:67:PRO:HD2	1:C:70:ILE:HD11	1.98	0.46
1:C:1846:GLN:HB2	1:C:1851:SER:HB2	1.98	0.46
1:A:134:TYR:O	1:A:137:GLN:HG2	2.16	0.46
1:E:1090:PHE:CZ	1:E:1092:GLU:HG3	2.50	0.46
1:D:31:LEU:HD13	1:D:191:ILE:HG12	1.98	0.45
1:D:186:LEU:HD12	1:C:2115:ASN:HD21	1.81	0.45
1:D:1659:THR:HG23	1:D:1662:GLU:H	1.81	0.45
1:B:845:SER:OG	1:B:880:ARG:NH1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:849:ILE:HG13	1:B:1383:LEU:HD12	1.98	0.45
1:B:918:ASN:OD1	1:B:918:ASN:N	2.49	0.45
1:C:311:GLN:OE1	1:C:315:ARG:NH2	2.49	0.45
1:C:1035:PRO:O	1:C:1039:GLN:HG2	2.15	0.45
1:F:1098:ASP:OD1	1:F:1098:ASP:N	2.48	0.45
1:F:1693:TYR:HE2	1:F:1836:ILE:HD11	1.82	0.45
1:A:71:ILE:HG23	1:A:92:PHE:HE2	1.81	0.45
1:A:630:ILE:HD13	1:A:716:LEU:HG	1.98	0.45
1:E:1398:MET:HA	1:E:1403:GLN:HE22	1.81	0.45
1:E:1587:ARG:NH2	1:E:1605:LYS:O	2.49	0.45
1:E:2083:ASP:HB3	1:E:2137:LEU:HD11	1.97	0.45
1:D:293:LEU:HD22	1:D:566:ARG:CD	2.45	0.45
1:D:759:TYR:OH	1:D:778:GLU:OE1	2.26	0.45
1:D:928:GLY:H	1:D:931:LYS:HD3	1.82	0.45
1:D:2146:SER:HB2	1:C:2118:ILE:H	1.80	0.45
1:B:630:ILE:HD13	1:B:716:LEU:HG	1.98	0.45
1:B:713:TYR:CE2	1:B:1170:GLU:HG2	2.52	0.45
1:C:1491:THR:O	1:C:1491:THR:OG1	2.28	0.45
1:C:1587:ARG:NH2	1:C:1605:LYS:O	2.49	0.45
1:F:16:PRO:HA	1:F:198:LEU:HD23	1.98	0.45
1:F:209:ALA:HB1	1:F:1522:LEU:HD12	1.97	0.45
1:A:845:SER:OG	1:A:880:ARG:NH1	2.50	0.45
1:A:1931:ASP:O	1:A:1934:LYS:HG2	2.16	0.45
1:E:1763:LEU:HD13	1:E:1803:TRP:HE1	1.80	0.45
1:D:2113:VAL:HG22	1:C:2146:SER:OG	2.16	0.45
1:B:134:TYR:O	1:B:137:GLN:HG2	2.16	0.45
1:B:786:CYS:O	1:B:790:ILE:HG12	2.16	0.45
1:B:1578:VAL:HG13	1:B:1584:ALA:HB1	1.97	0.45
1:C:842:HIS:CE1	1:C:1021:ARG:HA	2.52	0.45
1:C:989:THR:HG23	1:C:1006:ILE:HG12	1.99	0.45
1:C:1919:ARG:HD2	1:C:1919:ARG:HA	1.53	0.45
1:F:9:ASN:HA	1:F:12:LYS:NZ	2.31	0.45
1:F:277:ASN:HB3	1:F:281:ARG:HH21	1.82	0.45
1:F:278:HIS:HA	1:F:281:ARG:HG2	1.98	0.45
1:F:1340:ILE:HG22	1:F:1342:THR:HG22	1.97	0.45
1:A:952:ILE:HD11	1:A:960:ILE:HD12	1.99	0.45
1:A:1443:THR:HG23	1:A:1446:ASP:H	1.82	0.45
1:E:898:THR:HG23	1:E:900:PRO:HD2	1.98	0.45
1:E:1919:ARG:HH12	1:E:2084:LEU:HD23	1.81	0.45
1:B:453:LYS:HB2	1:B:453:LYS:HE2	1.70	0.45
1:B:600:ALA:O	1:B:604:VAL:HG13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:967:MET:HA	1:B:1166:PRO:HA	1.99	0.45
1:B:1303:SER:HB2	1:A:1255:GLN:C	2.36	0.45
1:C:626:LEU:HD22	1:C:664:ILE:HD11	1.99	0.45
1:F:1583:GLU:HB2	1:F:1608:LEU:HD21	1.98	0.45
1:F:1789:VAL:HG12	1:F:1791:HIS:H	1.81	0.45
1:F:2113:VAL:HG22	1:E:2146:SER:OG	2.16	0.45
1:E:105:THR:HG22	1:E:153:LYS:HB3	1.99	0.45
1:D:1340:ILE:HG22	1:D:1342:THR:HG22	1.97	0.45
1:D:1340:ILE:HD11	1:D:1390:PRO:HB3	1.98	0.45
1:D:1451:GLN:O	1:D:1455:SER:N	2.48	0.45
1:C:1682:ALA:O	1:C:1686:ILE:HG12	2.16	0.45
1:C:1730:ARG:HG2	1:C:1743:GLU:HG2	1.99	0.45
1:C:1932:LEU:HB2	1:C:2099:ILE:HD11	1.98	0.45
1:F:480:ARG:HD3	1:F:1238:ARG:NH1	2.30	0.45
1:F:712:HIS:HB2	1:F:714:ARG:HG2	1.98	0.45
1:A:15:SER:O	1:A:18:THR:OG1	2.33	0.45
1:A:82:HIS:CD2	1:A:83:PRO:HD2	2.52	0.45
1:A:285:SER:HB2	1:A:403:GLU:HB3	1.98	0.45
1:A:340:ARG:HG2	1:A:373:LEU:HD13	1.97	0.45
1:A:967:MET:HA	1:A:1166:PRO:HA	1.99	0.45
1:A:2115:ASN:OD1	1:A:2116:LYS:HG2	2.16	0.45
1:E:629:LEU:HD13	1:E:668:LEU:HD11	1.97	0.45
1:D:1634:GLU:OE1	1:D:1637:ARG:NH2	2.49	0.45
1:D:2052:VAL:CG2	1:C:205:ALA:HB2	2.43	0.45
1:B:285:SER:HB2	1:B:403:GLU:HB3	1.98	0.45
1:C:839:GLU:OE1	1:C:839:GLU:N	2.28	0.45
1:C:952:ILE:HD11	1:C:960:ILE:HD12	1.98	0.45
1:C:1919:ARG:HH12	1:C:2084:LEU:HD23	1.81	0.45
1:F:609:PHE:O	1:F:613:ILE:HG12	2.17	0.45
1:F:1645:PRO:HB2	1:F:1648:ASP:HB2	1.97	0.45
1:F:1659:THR:HG23	1:F:1662:GLU:H	1.81	0.45
1:A:52:ASP:OD2	1:A:1666:ARG:NE	2.50	0.45
1:E:623:PHE:O	1:E:627:ARG:HG3	2.16	0.45
1:B:38:ILE:HG13	1:B:39:VAL:N	2.32	0.45
1:B:340:ARG:HG2	1:B:373:LEU:HD13	1.97	0.45
1:C:311:GLN:HG3	1:C:353:TYR:CE2	2.52	0.45
1:F:928:GLY:H	1:F:931:LYS:HD3	1.82	0.45
1:F:1364:GLN:NE2	1:E:2047:LEU:HB2	2.31	0.45
1:A:786:CYS:O	1:A:790:ILE:HG12	2.16	0.45
1:A:1664:LEU:HD21	1:A:1685:MET:HE3	1.98	0.45
1:E:842:HIS:CE1	1:E:1021:ARG:HA	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1418:ARG:HB2	1:E:1423:TRP:CZ3	2.52	0.45
1:F:1418:ARG:NH2	1:F:1421:GLY:HA2	2.32	0.45
1:A:1205:LEU:HD21	1:A:1233:THR:HG23	1.98	0.45
1:E:116:ASP:N	1:E:116:ASP:OD1	2.43	0.45
1:E:1636:TRP:CH2	1:E:1640:LYS:HG3	2.52	0.45
1:E:1706:SER:HA	1:E:1735:PHE:CE1	2.51	0.45
1:D:712:HIS:HB2	1:D:714:ARG:HG2	1.98	0.45
1:D:1364:GLN:NE2	1:C:2047:LEU:HB2	2.31	0.45
1:D:1418:ARG:NH2	1:D:1421:GLY:HA2	2.32	0.45
1:C:357:ILE:HG23	1:C:358:GLN:HG3	1.98	0.45
1:C:421:THR:HG21	1:A:597:LEU:HD12	1.98	0.45
1:C:682:LYS:HE3	1:C:682:LYS:HB3	1.84	0.45
1:F:1297:SER:HB2	1:E:1451:GLN:NE2	2.31	0.45
1:A:713:TYR:CE2	1:A:1170:GLU:HG2	2.52	0.45
1:A:1371:ILE:HD12	1:A:1371:ILE:HA	1.80	0.45
1:E:1104:TYR:OH	1:E:1146:HIS:ND1	2.31	0.45
1:D:277:ASN:HB3	1:D:281:ARG:HH21	1.82	0.45
1:D:1014:LYS:NZ	1:D:1053:LYS:HD3	2.32	0.45
1:D:1693:TYR:HE2	1:D:1836:ILE:HD11	1.82	0.45
1:D:1868:TYR:CG	1:D:1898:GLU:HB2	2.52	0.45
1:B:1358:LEU:HD22	1:B:1385:ARG:HB2	1.99	0.45
1:C:298:LEU:HD21	1:C:302:TYR:HB2	1.99	0.45
1:C:834:SER:HB3	1:C:896:ILE:HG13	1.99	0.45
1:C:927:GLY:HA2	1:C:931:LYS:HG2	1.99	0.45
1:C:1418:ARG:HB2	1:C:1423:TRP:CZ3	2.52	0.45
1:F:31:LEU:HD13	1:F:191:ILE:HG12	1.98	0.45
1:F:1014:LYS:NZ	1:F:1053:LYS:HD3	2.32	0.45
1:F:1298:HIS:CG	1:F:1299:LYS:N	2.85	0.45
1:F:1879:PHE:HB3	1:F:1886:LEU:HB2	2.00	0.45
1:A:502:SER:OG	1:A:506:GLY:HA2	2.17	0.45
1:E:298:LEU:HD21	1:E:302:TYR:HB2	1.99	0.45
1:E:311:GLN:OE1	1:E:315:ARG:NH2	2.49	0.45
1:E:330:ALA:HB3	1:E:544:ASP:OD2	2.17	0.45
1:E:834:SER:HB3	1:E:896:ILE:HG13	1.99	0.45
1:E:937:GLY:O	1:E:941:LYS:HG3	2.17	0.45
1:E:1446:ASP:OD1	1:E:1446:ASP:N	2.50	0.45
1:D:1195:ASP:OD1	1:D:1195:ASP:N	2.51	0.44
1:B:1205:LEU:HD21	1:B:1233:THR:HG23	1.98	0.44
1:C:105:THR:HG22	1:C:153:LYS:HB3	1.99	0.44
1:C:307:THR:HG23	1:C:308:LEU:HD12	1.99	0.44
1:C:1918:ASN:O	1:C:1919:ARG:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:139:LEU:HD13	1:F:152:TYR:HB2	1.98	0.44
1:F:1915:LEU:HD11	1:F:2085:THR:HG23	1.98	0.44
1:F:2047:LEU:CD1	1:E:1360:LEU:HD23	2.46	0.44
1:F:2146:SER:HB2	1:E:2118:ILE:N	2.32	0.44
1:E:768:TYR:CE2	1:E:786:CYS:HB2	2.51	0.44
1:E:1672:VAL:HG21	1:E:1682:ALA:HB1	1.99	0.44
1:E:1846:GLN:HB2	1:E:1851:SER:HB2	1.98	0.44
1:E:1932:LEU:HB2	1:E:2099:ILE:HD11	1.98	0.44
1:D:278:HIS:HA	1:D:281:ARG:HG2	1.98	0.44
1:B:2115:ASN:OD1	1:B:2116:LYS:HG2	2.16	0.44
1:C:623:PHE:O	1:C:627:ARG:HG3	2.16	0.44
1:C:863:PRO:HG2	1:C:868:LEU:HB2	2.00	0.44
1:C:1636:TRP:CH2	1:C:1640:LYS:HG3	2.52	0.44
1:F:498:TRP:CH2	1:F:514:PRO:HG3	2.52	0.44
1:F:796:GLU:HG3	1:F:1075:LEU:HA	1.98	0.44
1:F:1022:LYS:HZ2	1:F:1022:LYS:HB3	1.82	0.44
1:A:1084:PHE:HE1	1:A:1130:HIS:ND1	2.14	0.44
1:A:1929:PHE:O	1:A:1933:LEU:HG	2.18	0.44
1:E:548:ILE:HD12	1:E:549:ASP:H	1.83	0.44
1:D:609:PHE:O	1:D:613:ILE:HG12	2.17	0.44
1:D:637:TYR:HB2	1:D:1164:VAL:CG1	2.47	0.44
1:D:1602:LYS:HB3	1:D:1603:PRO:HD3	1.99	0.44
1:B:52:ASP:O	1:B:1669:ARG:NH2	2.44	0.44
1:B:952:ILE:HD11	1:B:960:ILE:HD12	1.99	0.44
1:B:1078:GLN:O	1:B:1081:THR:OG1	2.35	0.44
1:B:1591:LYS:HA	1:B:1599:ILE:HB	2.00	0.44
1:B:1664:LEU:HD11	1:B:1685:MET:HE3	2.00	0.44
1:B:1929:PHE:O	1:B:1933:LEU:HG	2.18	0.44
1:B:2150:PHE:O	1:A:2063:ARG:HG2	2.18	0.44
1:C:967:MET:HE1	1:C:1139:TRP:CE2	2.52	0.44
1:F:1340:ILE:HD11	1:F:1390:PRO:HB3	1.98	0.44
1:E:311:GLN:HG3	1:E:353:TYR:CE2	2.52	0.44
1:E:626:LEU:HD22	1:E:664:ILE:HD11	1.99	0.44
1:E:952:ILE:HD11	1:E:960:ILE:HD12	1.98	0.44
1:D:498:TRP:CH2	1:D:514:PRO:HG3	2.52	0.44
1:D:1879:PHE:HB3	1:D:1886:LEU:HB2	2.00	0.44
1:D:2122:ASP:HB2	1:C:2132:ARG:HH22	1.82	0.44
1:B:52:ASP:OD2	1:B:1666:ARG:NE	2.50	0.44
1:B:502:SER:OG	1:B:506:GLY:HA2	2.17	0.44
1:C:428:GLU:O	1:C:602:ARG:NH1	2.50	0.44
1:C:937:GLY:O	1:C:941:LYS:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:ARG:O	1:A:195:ARG:NH1	2.40	0.44
1:E:108:PHE:CD2	1:E:154:ILE:HD11	2.53	0.44
1:E:125:LYS:HA	1:E:156:PHE:HE2	1.82	0.44
1:D:888:THR:HG22	1:D:890:ALA:H	1.83	0.44
1:D:1195:ASP:HB2	1:D:1398:MET:CE	2.46	0.44
1:B:82:HIS:CD2	1:B:83:PRO:HD2	2.52	0.44
1:B:1209:GLN:HB3	1:B:1276:LEU:HD22	1.99	0.44
1:C:227:ILE:H	1:C:227:ILE:HG13	1.68	0.44
1:C:964:ARG:NH2	1:C:1088:ASP:OD2	2.47	0.44
1:C:1370:TYR:OH	1:C:1557:LYS:O	2.34	0.44
1:F:1602:LYS:HB3	1:F:1603:PRO:HD3	1.99	0.44
1:A:1591:LYS:HA	1:A:1599:ILE:HB	2.00	0.44
1:A:1853:ARG:HD3	1:A:1853:ARG:HA	1.69	0.44
1:E:307:THR:HG23	1:E:308:LEU:HD12	1.99	0.44
1:B:756:GLU:OE1	1:B:761:GLU:HA	2.16	0.44
1:C:323:ASN:HD21	1:E:316:ARG:HH21	1.66	0.44
1:C:330:ALA:HB3	1:C:544:ASP:OD2	2.17	0.44
1:C:746:VAL:HG21	1:C:1040:PHE:CD1	2.53	0.44
1:C:863:PRO:HB2	1:C:867:LYS:HB3	2.00	0.44
1:C:909:GLU:OE1	1:C:1063:LYS:HG2	2.17	0.44
1:C:1602:LYS:HB3	1:C:1603:PRO:HD3	2.00	0.44
1:F:2122:ASP:HB2	1:E:2132:ARG:HH22	1.82	0.44
1:A:50:ASN:HB3	1:A:1670:VAL:HG23	2.00	0.44
1:A:1341:PHE:O	1:A:1342:THR:OG1	2.28	0.44
1:E:27:TYR:O	1:E:31:LEU:HG	2.18	0.44
1:E:909:GLU:OE1	1:E:1063:LYS:HG2	2.17	0.44
1:E:1083:LEU:HD23	1:E:1083:LEU:HA	1.81	0.44
1:E:1837:LYS:HA	1:E:1837:LYS:HD3	1.75	0.44
1:D:139:LEU:HD13	1:D:152:TYR:HB2	1.98	0.44
1:D:337:MET:SD	1:D:511:PHE:HD2	2.41	0.44
1:D:971:ALA:HA	1:D:1162:THR:HG22	2.00	0.44
1:D:2113:VAL:HG11	1:C:2150:PHE:CD2	2.53	0.44
1:B:10:LYS:HD2	1:B:10:LYS:HA	1.83	0.44
1:B:792:LEU:O	1:B:796:GLU:HG2	2.18	0.44
1:B:1070:VAL:HG13	1:B:1093:PHE:CZ	2.53	0.44
1:B:1365:HIS:C	1:B:1367:THR:H	2.21	0.44
1:B:1531:LEU:HD23	1:B:1531:LEU:HA	1.84	0.44
1:C:108:PHE:CD2	1:C:154:ILE:HD11	2.53	0.44
1:C:613:ILE:HD13	1:C:613:ILE:HA	1.81	0.44
1:F:968:TYR:CE2	1:F:1172:LEU:HD21	2.53	0.44
1:F:1586:CYS:O	1:F:1590:LEU:HD23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1078:GLN:O	1:A:1081:THR:OG1	2.35	0.44
1:A:1209:GLN:HB3	1:A:1276:LEU:HD22	1.99	0.44
1:A:1337:GLN:OE1	1:A:1418:ARG:HD2	2.18	0.44
1:A:1908:ILE:HG12	1:A:2042:TRP:HB3	1.99	0.44
1:E:746:VAL:HG21	1:E:1040:PHE:CD1	2.53	0.44
1:E:856:LEU:HD21	1:E:862:ASN:HB3	2.00	0.44
1:E:863:PRO:HG2	1:E:868:LEU:HB2	2.00	0.44
1:E:912:TYR:HA	1:E:915:ILE:HG22	1.99	0.44
1:E:927:GLY:HA2	1:E:931:LYS:HG2	1.99	0.44
1:D:968:TYR:CE2	1:D:1172:LEU:HD21	2.53	0.44
1:D:1789:VAL:HG12	1:D:1791:HIS:H	1.81	0.44
1:B:1443:THR:HG23	1:B:1446:ASP:H	1.82	0.44
1:C:148:ILE:HG13	1:C:149:PRO:HD2	2.00	0.44
1:F:637:TYR:HB2	1:F:1164:VAL:CG1	2.47	0.44
1:F:1868:TYR:CG	1:F:1898:GLU:HB2	2.52	0.44
1:E:67:PRO:HD2	1:E:70:ILE:HD11	1.98	0.44
1:E:1730:ARG:HG2	1:E:1743:GLU:HG2	1.99	0.44
1:E:1766:MET:N	1:E:1766:MET:SD	2.91	0.44
1:D:431:ILE:HD11	1:D:471:THR:HG23	1.99	0.44
1:D:1586:CYS:O	1:D:1590:LEU:HD23	2.18	0.44
1:B:1079:VAL:O	1:B:1083:LEU:N	2.49	0.44
1:C:27:TYR:O	1:C:31:LEU:HG	2.18	0.44
1:C:114:THR:OG1	1:C:116:ASP:OD1	2.26	0.44
1:F:888:THR:HG22	1:F:890:ALA:H	1.83	0.44
1:A:183:TYR:O	1:A:187:VAL:HG13	2.18	0.44
1:A:792:LEU:O	1:A:796:GLU:HG2	2.18	0.44
1:A:1664:LEU:HD11	1:A:1685:MET:HE3	2.00	0.44
1:D:1298:HIS:CG	1:D:1299:LYS:N	2.85	0.43
1:B:1908:ILE:HG12	1:B:2042:TRP:HB3	1.99	0.43
1:C:356:ARG:HD2	1:C:1414:MET:HE3	1.98	0.43
1:C:1672:VAL:HG21	1:C:1682:ALA:HB1	1.99	0.43
1:A:849:ILE:HG13	1:A:1383:LEU:HD12	1.98	0.43
1:A:1358:LEU:HD22	1:A:1385:ARG:HB2	1.99	0.43
1:A:1531:LEU:HD23	1:A:1531:LEU:HA	1.84	0.43
1:A:1555:VAL:O	1:A:1559:ILE:HG22	2.18	0.43
1:A:1865:ASP:O	1:A:1867:ARG:NH1	2.51	0.43
1:E:1838:ASP:OD2	1:E:1842:ARG:NE	2.51	0.43
1:E:1901:MET:HG3	1:E:1902:LYS:HE3	1.99	0.43
1:D:52:ASP:OD1	1:D:52:ASP:N	2.51	0.43
1:B:295:GLN:HE22	1:B:539:ASP:HB3	1.83	0.43
1:C:125:LYS:HA	1:C:156:PHE:HE2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:640:PHE:CG	1:C:641:PRO:HD3	2.53	0.43
1:F:971:ALA:HA	1:F:1162:THR:HG22	2.00	0.43
1:A:317:ALA:HB1	1:A:509:ILE:CD1	2.49	0.43
1:A:860:ARG:O	1:A:860:ARG:HD3	2.18	0.43
1:A:1868:TYR:O	1:A:1871:VAL:HG12	2.19	0.43
1:E:756:GLU:HA	1:E:764:VAL:HG21	2.01	0.43
1:D:1080:TRP:HE1	1:D:1089:CYS:HB2	1.83	0.43
1:D:1250:PRO:HG3	1:D:1266:GLY:O	2.18	0.43
1:B:1341:PHE:O	1:B:1342:THR:OG1	2.28	0.43
1:B:1555:VAL:O	1:B:1559:ILE:HG22	2.18	0.43
1:B:1868:TYR:O	1:B:1871:VAL:HG12	2.19	0.43
1:C:298:LEU:HD11	1:C:478:LEU:HD22	2.00	0.43
1:C:912:TYR:HA	1:C:915:ILE:HG22	1.99	0.43
1:C:1581:THR:O	1:C:1585:ILE:HG12	2.18	0.43
1:C:1702:ARG:HG3	1:C:1703:ARG:N	2.34	0.43
1:F:255:ARG:HA	1:F:255:ARG:HD3	1.70	0.43
1:F:1084:PHE:CZ	1:F:1134:VAL:HG21	2.51	0.43
1:A:911:TYR:CD1	1:A:1005:VAL:HG21	2.53	0.43
1:E:428:GLU:O	1:E:602:ARG:NH1	2.50	0.43
1:E:518:LEU:HD23	1:E:518:LEU:HA	1.87	0.43
1:E:1702:ARG:HG3	1:E:1703:ARG:N	2.34	0.43
1:D:43:ILE:HD11	1:D:172:TRP:CD2	2.53	0.43
1:D:1915:LEU:HD11	1:D:2085:THR:HG23	1.98	0.43
1:D:2150:PHE:HZ	1:C:2120:PRO:HA	1.80	0.43
1:B:860:ARG:O	1:B:860:ARG:HD3	2.18	0.43
1:B:2063:ARG:HG2	1:A:2150:PHE:O	2.18	0.43
1:C:252:SER:HB2	1:C:1129:LEU:HB3	2.00	0.43
1:C:1650:PHE:CD1	1:C:1660:PHE:HB3	2.53	0.43
1:C:1766:MET:SD	1:C:1766:MET:N	2.91	0.43
1:C:1901:MET:HG3	1:C:1902:LYS:HE3	1.99	0.43
1:C:1940:ASN:ND2	1:C:2066:SER:O	2.52	0.43
1:A:1645:PRO:HG2	1:A:1649:TRP:CD1	2.53	0.43
1:E:2065:ILE:HG23	1:E:2069:PHE:HD2	1.83	0.43
1:D:1223:GLN:NE2	1:D:1593:MET:O	2.51	0.43
1:B:597:LEU:HD12	1:E:421:THR:HG21	1.98	0.43
1:B:1501:ASN:OD1	1:B:1501:ASN:N	2.52	0.43
1:C:1349:PHE:HD1	1:C:1352:MET:SD	2.41	0.43
1:C:1838:ASP:OD2	1:C:1842:ARG:NE	2.51	0.43
1:F:52:ASP:OD1	1:F:52:ASP:N	2.51	0.43
1:F:312:ILE:HD12	1:F:312:ILE:HA	1.92	0.43
1:F:2113:VAL:HG11	1:E:2150:PHE:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:35:ARG:O	1:A:39:VAL:HG23	2.19	0.43
1:A:240:ILE:O	1:A:244:VAL:HG23	2.19	0.43
1:A:1070:VAL:HG13	1:A:1093:PHE:CZ	2.53	0.43
1:A:1351:ASP:OD1	1:A:1351:ASP:N	2.47	0.43
1:E:356:ARG:HD2	1:E:1414:MET:HE3	2.00	0.43
1:E:461:LYS:HG2	1:E:462:TYR:CD2	2.54	0.43
1:E:1650:PHE:CD1	1:E:1660:PHE:HB3	2.53	0.43
1:E:1794:LEU:HB2	1:E:1803:TRP:CZ3	2.54	0.43
1:D:1514:THR:HG22	1:C:2050:GLU:HG2	1.91	0.43
1:D:1837:LYS:HD3	1:D:1837:LYS:HA	1.84	0.43
1:B:35:ARG:O	1:B:39:VAL:HG23	2.19	0.43
1:B:1910:PRO:HG3	1:B:2048:SER:HB3	2.01	0.43
1:B:2091:VAL:HA	1:B:2094:TRP:CD1	2.54	0.43
1:C:425:SER:O	1:C:429:LEU:HD13	2.18	0.43
1:C:548:ILE:HD12	1:C:549:ASP:H	1.83	0.43
1:C:1794:LEU:HB2	1:C:1803:TRP:CZ3	2.54	0.43
1:C:2065:ILE:HG23	1:C:2069:PHE:HD2	1.83	0.43
1:F:1195:ASP:OD1	1:F:1195:ASP:N	2.51	0.43
1:F:1940:ASN:ND2	1:F:2066:SER:O	2.52	0.43
1:A:38:ILE:HG13	1:A:39:VAL:N	2.32	0.43
1:A:918:ASN:OD1	1:A:918:ASN:N	2.49	0.43
1:E:734:ASN:OD1	1:E:735:MET:N	2.52	0.43
1:E:989:THR:HG23	1:E:1006:ILE:HG12	1.99	0.43
1:E:1906:ALA:HB3	1:E:2042:TRP:CD2	2.53	0.43
1:B:56:ALA:O	1:B:60:VAL:HG23	2.19	0.43
1:B:905:LEU:HD13	1:B:905:LEU:HA	1.89	0.43
1:B:1366:VAL:O	1:B:1366:VAL:HG22	2.19	0.43
1:C:316:ARG:HH21	1:E:323:ASN:HD21	1.66	0.43
1:C:1188:ILE:H	1:C:1188:ILE:HD12	1.83	0.43
1:C:1906:ALA:HB3	1:C:2042:TRP:CD2	2.53	0.43
1:F:204:ARG:HH11	1:E:2054:SER:HB2	1.83	0.43
1:F:316:ARG:HG2	1:F:320:TYR:CZ	2.54	0.43
1:F:1223:GLN:NE2	1:F:1593:MET:O	2.51	0.43
1:A:67:PRO:O	1:A:71:ILE:HG12	2.19	0.43
1:A:295:GLN:OE1	1:A:539:ASP:N	2.46	0.43
1:A:1079:VAL:O	1:A:1083:LEU:N	2.49	0.43
1:E:252:SER:HB2	1:E:1129:LEU:HB3	2.00	0.43
1:D:855:TYR:OH	1:D:871:GLU:OE1	2.34	0.43
1:B:540:LYS:HA	1:B:543:LEU:HD12	2.01	0.43
1:B:1010:LYS:HE2	1:B:1010:LYS:HB3	1.59	0.43
1:B:1645:PRO:HG2	1:B:1649:TRP:CD1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1664:LEU:HD21	1:B:1685:MET:HE3	2.00	0.43
1:C:427:LEU:HD23	1:C:427:LEU:HA	1.85	0.43
1:C:1324:HIS:HE2	1:C:1369:ASP:CG	2.22	0.43
1:C:1446:ASP:N	1:C:1446:ASP:OD1	2.50	0.43
1:F:1283:MET:HG3	1:F:1287:ASN:HD21	1.84	0.43
1:E:293:LEU:HD23	1:E:570:LEU:HD11	2.00	0.43
1:E:449:THR:HG21	1:E:1272:SER:HB2	2.01	0.43
1:E:863:PRO:HB2	1:E:867:LYS:HB3	2.00	0.43
1:E:1283:MET:SD	1:E:1461:GLU:HB3	2.59	0.43
1:E:1602:LYS:HB3	1:E:1603:PRO:HD3	2.00	0.43
1:D:195:ARG:HH21	1:C:2056:VAL:HG21	1.84	0.43
1:D:840:ASP:OD1	1:D:840:ASP:N	2.52	0.43
1:D:1462:TYR:CD1	1:D:1608:LEU:HD22	2.54	0.43
1:B:183:TYR:O	1:B:187:VAL:HG13	2.18	0.43
1:B:1080:TRP:HA	1:B:1083:LEU:HB2	2.00	0.43
1:C:449:THR:HG21	1:C:1272:SER:HB2	2.01	0.43
1:C:856:LEU:HD21	1:C:862:ASN:HB3	2.00	0.43
1:F:337:MET:SD	1:F:511:PHE:HD2	2.41	0.43
1:F:470:THR:HG22	1:F:602:ARG:HD3	2.01	0.43
1:A:10:LYS:HD2	1:A:10:LYS:HA	1.83	0.43
1:A:498:TRP:CD1	1:A:498:TRP:N	2.87	0.43
1:A:601:ILE:HD13	1:A:601:ILE:HA	1.90	0.43
1:A:769:MET:N	1:A:772:GLU:OE2	2.47	0.43
1:A:905:LEU:HD13	1:A:905:LEU:HA	1.89	0.43
1:E:640:PHE:CG	1:E:641:PRO:HD3	2.53	0.43
1:D:316:ARG:HG2	1:D:320:TYR:CZ	2.54	0.43
1:D:628:TYR:CE2	1:D:1161:LYS:HE3	2.54	0.43
1:D:1364:GLN:HE22	1:C:2047:LEU:HB2	1.84	0.43
1:D:1699:GLN:HE22	1:D:1703:ARG:HB3	1.84	0.43
1:B:3:LYS:NZ	1:B:1665:ASP:OD2	2.48	0.43
1:C:293:LEU:HD23	1:C:570:LEU:HD11	2.00	0.43
1:C:461:LYS:HG2	1:C:462:TYR:CD2	2.54	0.43
1:C:734:ASN:OD1	1:C:735:MET:N	2.52	0.43
1:C:1283:MET:SD	1:C:1461:GLU:HB3	2.59	0.43
1:C:1640:LYS:NZ	1:C:1839:ASP:O	2.31	0.43
1:F:1292:ALA:HB1	1:F:1308:LEU:HD12	2.01	0.43
1:F:1333:ILE:HG13	1:F:1453:LEU:HD22	2.01	0.43
1:A:334:ILE:HD12	1:A:511:PHE:CD1	2.54	0.43
1:A:1114:THR:HA	1:A:1117:PHE:CD1	2.54	0.43
1:A:1565:LYS:HB2	1:A:1565:LYS:HE2	1.86	0.43
1:E:425:SER:O	1:E:429:LEU:HD13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1177:GLU:O	1:E:1181:VAL:HG12	2.19	0.43
1:E:1347:PHE:CZ	1:E:1393:VAL:HG13	2.54	0.43
1:E:1569:SER:O	1:E:1569:SER:OG	2.35	0.43
1:D:1471:ILE:HD12	1:D:1603:PRO:HG2	2.00	0.42
1:D:1620:ILE:HD12	1:D:1624:LYS:HZ1	1.83	0.42
1:D:2146:SER:HB2	1:C:2118:ILE:N	2.32	0.42
1:B:42:MET:HG2	1:B:180:VAL:HG21	2.01	0.42
1:B:240:ILE:O	1:B:244:VAL:HG23	2.19	0.42
1:B:1076:PHE:CD1	1:B:1149:ILE:HD11	2.52	0.42
1:B:2151:TYR:HA	1:A:2067:LYS:HE3	2.01	0.42
1:C:673:GLN:HB3	1:A:422:LYS:HZ2	1.84	0.42
1:C:809:ALA:HB2	1:C:995:GLY:HA3	2.01	0.42
1:C:1795:PHE:HB3	1:C:1812:VAL:HG22	2.01	0.42
1:F:1514:THR:HG1	1:F:1517:GLU:HG3	1.82	0.42
1:A:295:GLN:HE22	1:A:539:ASP:HB3	1.83	0.42
1:A:1539:LYS:HE3	1:A:1539:LYS:HB3	1.84	0.42
1:D:255:ARG:HA	1:D:255:ARG:HD3	1.70	0.42
1:D:1333:ILE:HG13	1:D:1453:LEU:HD22	2.01	0.42
1:D:1514:THR:HG1	1:D:1517:GLU:HG3	1.83	0.42
1:B:50:ASN:HB3	1:B:1670:VAL:HG23	2.00	0.42
1:B:67:PRO:O	1:B:71:ILE:HG12	2.19	0.42
1:B:334:ILE:HD12	1:B:511:PHE:CD1	2.54	0.42
1:B:911:TYR:CD1	1:B:1005:VAL:HG21	2.53	0.42
1:B:912:TYR:OH	1:B:989:THR:HB	2.19	0.42
1:B:1337:GLN:OE1	1:B:1418:ARG:HD2	2.18	0.42
1:C:489:HIS:NE2	1:C:497:TYR:O	2.44	0.42
1:F:43:ILE:HD11	1:F:172:TRP:CD2	2.53	0.42
1:F:195:ARG:HH21	1:E:2056:VAL:HG21	1.84	0.42
1:F:431:ILE:HD11	1:F:471:THR:HG23	1.99	0.42
1:F:798:ASN:HD21	1:F:993:HIS:H	1.68	0.42
1:F:1835:THR:HB	1:F:1844:ILE:HG13	2.01	0.42
1:A:4:TYR:HA	1:A:7:ILE:HG22	2.01	0.42
1:E:809:ALA:HB2	1:E:995:GLY:HA3	2.01	0.42
1:B:317:ALA:HB1	1:B:509:ILE:CD1	2.49	0.42
1:B:1263:ILE:HG12	1:B:1285:ASP:OD1	2.19	0.42
1:C:707:ARG:HA	1:C:707:ARG:HD2	1.50	0.42
1:F:193:TYR:OH	1:F:198:LEU:HD21	2.19	0.42
1:A:739:ALA:O	1:A:743:LEU:HG	2.20	0.42
1:A:1366:VAL:HG22	1:A:1366:VAL:O	2.19	0.42
1:A:2086:GLU:O	1:A:2090:ILE:HG13	2.20	0.42
1:E:1188:ILE:H	1:E:1188:ILE:HD12	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1349:PHE:HD1	1:E:1352:MET:SD	2.41	0.42
1:D:748:TRP:CD1	1:D:978:PRO:HB2	2.55	0.42
1:D:798:ASN:HD21	1:D:993:HIS:H	1.68	0.42
1:B:985:PHE:CE2	1:B:1068:PHE:HB2	2.48	0.42
1:C:756:GLU:HA	1:C:764:VAL:HG21	2.01	0.42
1:C:823:SER:O	1:C:823:SER:OG	2.38	0.42
1:F:748:TRP:CD1	1:F:978:PRO:HB2	2.55	0.42
1:F:1080:TRP:HE1	1:F:1089:CYS:HB2	1.83	0.42
1:F:1250:PRO:HG3	1:F:1266:GLY:O	2.18	0.42
1:A:682:LYS:HE3	1:A:683:VAL:HG12	2.02	0.42
1:A:1076:PHE:CD1	1:A:1149:ILE:HD11	2.52	0.42
1:A:1080:TRP:HA	1:A:1083:LEU:HB2	2.00	0.42
1:A:1365:HIS:C	1:A:1367:THR:H	2.21	0.42
1:A:1518:MET:HA	1:A:1521:VAL:HG12	2.01	0.42
1:A:1910:PRO:HG3	1:A:2048:SER:HB3	2.01	0.42
1:E:298:LEU:HD11	1:E:478:LEU:HD22	2.00	0.42
1:E:489:HIS:NE2	1:E:497:TYR:O	2.44	0.42
1:E:1940:ASN:ND2	1:E:2066:SER:O	2.52	0.42
1:D:901:THR:O	1:D:905:LEU:HD23	2.20	0.42
1:B:867:LYS:O	1:B:871:GLU:HG2	2.19	0.42
1:B:1518:MET:HA	1:B:1521:VAL:HG12	2.01	0.42
1:C:1104:TYR:HD1	1:C:1142:MET:HE2	1.85	0.42
1:C:1345:SER:OG	1:C:1346:GLU:OE1	2.38	0.42
1:C:1347:PHE:CZ	1:C:1393:VAL:HG13	2.54	0.42
1:F:646:LYS:HD2	1:F:1160:LYS:HD2	2.01	0.42
1:F:1462:TYR:CD1	1:F:1608:LEU:HD22	2.54	0.42
1:F:1471:ILE:HD12	1:F:1603:PRO:HG2	2.00	0.42
1:F:1616:ARG:O	1:F:1620:ILE:HG12	2.20	0.42
1:F:1699:GLN:HE22	1:F:1703:ARG:HB3	1.84	0.42
1:A:422:LYS:HD3	1:A:422:LYS:HA	1.46	0.42
1:E:1913:TYR:O	1:E:1917:MET:HG2	2.20	0.42
1:E:1915:LEU:O	1:E:1919:ARG:HB2	2.20	0.42
1:D:193:TYR:OH	1:D:198:LEU:HD21	2.19	0.42
1:D:1299:LYS:HD3	1:D:1300:ARG:H	1.85	0.42
1:B:44:LYS:NZ	1:B:51:LYS:H	2.18	0.42
1:B:255:ARG:HA	1:B:255:ARG:HD3	1.88	0.42
1:B:422:LYS:HZ2	1:E:673:GLN:HB3	1.85	0.42
1:B:579:ILE:HD12	1:B:1193:LEU:HD11	2.01	0.42
1:B:1684:LEU:HD21	1:B:1841:LEU:HA	2.02	0.42
1:C:234:GLU:OE1	1:C:234:GLU:N	2.53	0.42
1:F:746:VAL:HG21	1:F:1040:PHE:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:901:THR:O	1:F:905:LEU:HD23	2.20	0.42
1:E:244:VAL:HG13	1:E:1083:LEU:HD23	2.01	0.42
1:E:925:SER:OG	1:E:931:LYS:HB2	2.19	0.42
1:E:1581:THR:O	1:E:1585:ILE:HG12	2.18	0.42
1:D:291:PHE:HB3	1:D:654:SER:HB2	2.02	0.42
1:D:1616:ARG:O	1:D:1620:ILE:HG12	2.20	0.42
1:D:1846:GLN:HB2	1:D:1851:SER:HB2	2.02	0.42
1:B:739:ALA:O	1:B:743:LEU:HG	2.20	0.42
1:B:770:MET:HE1	1:B:774:ARG:HE	1.85	0.42
1:B:1139:TRP:HA	1:B:1142:MET:CG	2.50	0.42
1:C:374:THR:O	1:C:377:MET:HE2	2.20	0.42
1:C:1169:ALA:O	1:C:1173:SER:OG	2.23	0.42
1:F:19:LEU:CD1	1:F:198:LEU:HB3	2.50	0.42
1:F:1104:TYR:OH	1:F:1146:HIS:ND1	2.41	0.42
1:A:579:ILE:HD12	1:A:1193:LEU:HD11	2.01	0.42
1:A:1243:ALA:HB3	1:A:1246:MET:HE1	2.02	0.42
1:A:2064:TYR:CE2	1:A:2068:THR:HG21	2.55	0.42
1:A:2141:LEU:HD23	1:A:2141:LEU:HA	1.89	0.42
1:E:148:ILE:HG13	1:E:149:PRO:HD2	2.00	0.42
1:E:1345:SER:OG	1:E:1346:GLU:OE1	2.38	0.42
1:D:293:LEU:HD23	1:D:570:LEU:HD11	2.02	0.42
1:D:470:THR:HG22	1:D:602:ARG:HD3	2.01	0.42
1:D:1581:THR:O	1:D:1585:ILE:HG12	2.20	0.42
1:D:1940:ASN:ND2	1:D:2066:SER:O	2.52	0.42
1:B:588:TYR:CE2	1:B:708:ILE:HD12	2.55	0.42
1:F:309:SER:HA	1:F:312:ILE:HG22	2.01	0.42
1:F:1607:VAL:HG12	1:F:1609:GLN:HE22	1.85	0.42
1:F:1608:LEU:HD23	1:F:1608:LEU:HA	1.90	0.42
1:A:56:ALA:O	1:A:60:VAL:HG23	2.19	0.42
1:A:540:LYS:HA	1:A:543:LEU:HD12	2.01	0.42
1:A:985:PHE:CE2	1:A:1068:PHE:HB2	2.48	0.42
1:A:2091:VAL:HA	1:A:2094:TRP:CD1	2.54	0.42
1:E:1286:LYS:O	1:E:1462:TYR:OH	2.34	0.42
1:D:646:LYS:HD2	1:D:1160:LYS:HD2	2.01	0.42
1:D:746:VAL:HG21	1:D:1040:PHE:CE1	2.54	0.42
1:D:974:THR:HG21	1:D:1066:SER:HA	2.02	0.42
1:D:1607:VAL:HG12	1:D:1609:GLN:HE22	1.85	0.42
1:B:856:LEU:O	1:B:1376:ARG:NH1	2.53	0.42
1:B:923:TYR:CE1	1:B:1074:LEU:HD11	2.51	0.42
1:B:963:LYS:HD3	1:B:964:ARG:N	2.35	0.42
1:B:1865:ASP:O	1:B:1867:ARG:NH1	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1943:ASP:N	1:B:1943:ASP:OD1	2.53	0.42
1:C:1367:THR:HG21	1:C:1517:GLU:HB3	2.02	0.42
1:F:291:PHE:HB3	1:F:654:SER:HB2	2.02	0.42
1:F:628:TYR:CE2	1:F:1161:LYS:HE3	2.54	0.42
1:F:1544:ARG:NH2	1:F:1620:ILE:HG21	2.35	0.42
1:A:420:ILE:HG21	1:A:659:TYR:CD1	2.55	0.42
1:A:640:PHE:O	1:A:644:ILE:HG12	2.20	0.42
1:A:856:LEU:O	1:A:1376:ARG:NH1	2.53	0.42
1:A:1149:ILE:HA	1:A:1152:LEU:HG	2.02	0.42
1:A:1356:LYS:H	1:A:1356:LYS:HG2	1.61	0.42
1:A:1501:ASN:OD1	1:A:1501:ASN:N	2.52	0.42
1:E:234:GLU:OE1	1:E:234:GLU:N	2.53	0.42
1:D:1283:MET:HG3	1:D:1287:ASN:HD21	1.84	0.42
1:D:1658:LYS:HE3	1:D:1662:GLU:HB3	2.02	0.42
1:D:2103:GLU:OE1	1:D:2103:GLU:HA	2.20	0.42
1:B:640:PHE:O	1:B:644:ILE:HG12	2.20	0.42
1:B:676:LYS:HG3	1:B:677:ALA:H	1.85	0.42
1:B:2064:TYR:CE2	1:B:2068:THR:HG21	2.55	0.42
1:C:2147:ILE:HG13	1:C:2151:TYR:HD2	1.85	0.42
1:F:972:ASP:OD1	1:F:972:ASP:N	2.47	0.42
1:F:1299:LYS:HD3	1:F:1300:ARG:H	1.85	0.42
1:F:1846:GLN:OE1	1:F:1853:ARG:NH1	2.53	0.42
1:A:1943:ASP:OD1	1:A:1943:ASP:N	2.53	0.42
1:E:1324:HIS:HE2	1:E:1369:ASP:CG	2.22	0.42
1:E:2147:ILE:HG13	1:E:2151:TYR:HD2	1.85	0.42
1:D:197:HIS:NE2	1:C:2122:ASP:HB3	2.36	0.41
1:D:707:ARG:HD3	1:D:707:ARG:H	1.86	0.41
1:B:267:VAL:HG12	1:B:640:PHE:CE1	2.55	0.41
1:B:324:LEU:HD22	1:B:547:LEU:HB3	2.02	0.41
1:B:682:LYS:HE3	1:B:683:VAL:HG12	2.02	0.41
1:B:798:ASN:OD1	1:B:993:HIS:HB3	2.20	0.41
1:B:1414:MET:O	1:B:1416:VAL:HG22	2.20	0.41
1:B:2086:GLU:O	1:B:2090:ILE:HG13	2.20	0.41
1:C:925:SER:OG	1:C:931:LYS:HB2	2.19	0.41
1:C:1177:GLU:O	1:C:1181:VAL:HG12	2.19	0.41
1:C:1658:LYS:HB3	1:C:1663:TRP:NE1	2.34	0.41
1:C:1877:VAL:N	1:C:1889:ASN:OD1	2.39	0.41
1:F:302:TYR:OH	1:F:481:ASP:OD2	2.26	0.41
1:F:840:ASP:N	1:F:840:ASP:OD1	2.52	0.41
1:F:1763:LEU:O	1:F:1767:MET:HG2	2.20	0.41
1:A:255:ARG:HA	1:A:255:ARG:HD3	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:298:LEU:HD23	1:A:298:LEU:HA	1.83	0.41
1:A:1263:ILE:HG12	1:A:1285:ASP:OD1	2.19	0.41
1:A:1414:MET:O	1:A:1416:VAL:HG22	2.20	0.41
1:E:1658:LYS:HB3	1:E:1663:TRP:NE1	2.34	0.41
1:D:19:LEU:CD1	1:D:198:LEU:HB3	2.50	0.41
1:D:584:TRP:CE3	1:D:604:VAL:HG21	2.55	0.41
1:D:1564:TYR:C	1:D:1565:LYS:HD3	2.41	0.41
1:D:1763:LEU:O	1:D:1767:MET:HG2	2.20	0.41
1:D:1846:GLN:OE1	1:D:1853:ARG:NH1	2.53	0.41
1:B:1111:ASP:OD1	1:B:1111:ASP:N	2.43	0.41
1:B:1149:ILE:HA	1:B:1152:LEU:HG	2.02	0.41
1:B:2067:LYS:HE3	1:A:2151:TYR:HA	2.01	0.41
1:C:796:GLU:HG3	1:C:1075:LEU:HA	2.02	0.41
1:F:186:LEU:HD12	1:E:2115:ASN:ND2	2.36	0.41
1:F:197:HIS:NE2	1:E:2122:ASP:HB3	2.36	0.41
1:F:1456:CYS:HB2	1:F:1613:ILE:HD13	2.02	0.41
1:F:1611:VAL:HG23	1:F:1615:ASN:HD22	1.85	0.41
1:F:2113:VAL:CG2	1:E:2146:SER:OG	2.69	0.41
1:F:2147:ILE:HA	1:E:2113:VAL:HG22	2.02	0.41
1:A:867:LYS:O	1:A:871:GLU:HG2	2.19	0.41
1:A:1070:VAL:HG13	1:A:1093:PHE:HZ	1.85	0.41
1:E:340:ARG:HH21	1:E:364:ASN:HB3	1.85	0.41
1:E:389:LEU:HD23	1:E:389:LEU:HA	1.89	0.41
1:E:880:ARG:NH2	1:E:881:ILE:O	2.53	0.41
1:E:964:ARG:NH2	1:E:1088:ASP:OD2	2.47	0.41
1:E:1367:THR:HG21	1:E:1517:GLU:HB3	2.02	0.41
1:E:1631:LEU:HD21	1:E:1867:ARG:H	1.86	0.41
1:B:863:PRO:HG2	1:B:868:LEU:HD22	2.02	0.41
1:B:1070:VAL:HG13	1:B:1093:PHE:HZ	1.85	0.41
1:F:257:PHE:CE2	1:F:259:PHE:HB2	2.56	0.41
1:F:2056:VAL:O	1:F:2059:ILE:HG22	2.20	0.41
1:A:44:LYS:NZ	1:A:51:LYS:H	2.18	0.41
1:A:863:PRO:HG2	1:A:868:LEU:HD22	2.02	0.41
1:A:963:LYS:HD3	1:A:964:ARG:N	2.35	0.41
1:A:2111:ASN:HB3	1:A:2112:MET:CE	2.50	0.41
1:E:843:LEU:HB3	1:E:880:ARG:HD2	2.02	0.41
1:E:1014:LYS:HE2	1:E:1014:LYS:HB3	1.85	0.41
1:E:1115:ASP:N	1:E:1115:ASP:OD1	2.53	0.41
1:D:383:LYS:HE3	1:D:383:LYS:HB2	1.89	0.41
1:D:1637:ARG:HH22	1:D:1863:ILE:HG12	1.86	0.41
1:D:2147:ILE:HA	1:C:2113:VAL:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4:TYR:HA	1:B:7:ILE:HG22	2.01	0.41
1:B:420:ILE:HG21	1:B:659:TYR:CD1	2.55	0.41
1:B:1083:LEU:HD12	1:B:1084:PHE:CE1	2.56	0.41
1:B:1161:LYS:HE2	1:B:1161:LYS:HB2	1.90	0.41
1:B:1539:LYS:HE3	1:B:1539:LYS:HB3	1.84	0.41
1:C:498:TRP:CE3	1:C:514:PRO:HD3	2.55	0.41
1:C:854:ARG:NH2	1:C:1348:GLU:OE2	2.53	0.41
1:C:1415:LYS:HD2	1:C:1424:VAL:HA	2.02	0.41
1:C:1507:ILE:HD12	1:C:1556:MET:SD	2.61	0.41
1:F:26:ASP:OD2	1:F:27:TYR:N	2.53	0.41
1:F:1006:ILE:HG22	1:F:1010:LYS:NZ	2.35	0.41
1:F:1364:GLN:HE22	1:E:2047:LEU:HB2	1.84	0.41
1:A:324:LEU:HD22	1:A:547:LEU:HB3	2.02	0.41
1:A:923:TYR:CE1	1:A:1074:LEU:HD11	2.51	0.41
1:E:854:ARG:NH2	1:E:1348:GLU:OE2	2.53	0.41
1:D:309:SER:HA	1:D:312:ILE:HG22	2.01	0.41
1:D:487:ILE:O	1:D:490:SER:OG	2.28	0.41
1:D:1006:ILE:HG22	1:D:1010:LYS:NZ	2.35	0.41
1:D:1292:ALA:HB1	1:D:1308:LEU:HD12	2.01	0.41
1:D:1611:VAL:HG23	1:D:1615:ASN:HD22	1.85	0.41
1:B:89:LYS:HE3	1:B:89:LYS:HB3	1.76	0.41
1:B:329:PRO:HB3	1:B:381:GLU:HB3	2.03	0.41
1:B:1114:THR:HA	1:B:1117:PHE:CD1	2.54	0.41
1:C:640:PHE:CD1	1:C:641:PRO:HD3	2.56	0.41
1:C:880:ARG:NH2	1:C:881:ILE:O	2.53	0.41
1:F:855:TYR:OH	1:F:871:GLU:OE1	2.34	0.41
1:F:1658:LYS:HE3	1:F:1662:GLU:HB3	2.02	0.41
1:A:1:MET:HA	1:A:1690:LYS:NZ	2.35	0.41
1:A:643:LEU:HD23	1:A:643:LEU:HA	1.92	0.41
1:A:912:TYR:OH	1:A:989:THR:HB	2.19	0.41
1:A:2101:GLN:O	1:A:2105:LEU:HD23	2.21	0.41
1:E:982:SER:HB3	1:E:1056:TRP:HE3	1.85	0.41
1:D:186:LEU:HD12	1:C:2115:ASN:ND2	2.36	0.41
1:D:1544:ARG:NH2	1:D:1620:ILE:HG21	2.35	0.41
1:B:363:GLN:HA	1:B:366:ARG:HH12	1.86	0.41
1:B:943:LEU:HD12	1:B:943:LEU:HA	1.88	0.41
1:B:1243:ALA:HB3	1:B:1246:MET:HE1	2.03	0.41
1:B:1283:MET:HG3	1:B:1287:ASN:ND2	2.36	0.41
1:B:1467:PHE:O	1:B:1471:ILE:HG12	2.21	0.41
1:B:2111:ASN:HB3	1:B:2112:MET:CE	2.50	0.41
1:C:355:PRO:HB2	1:C:357:ILE:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:932:ILE:HG13	1:C:932:ILE:H	1.66	0.41
1:C:1115:ASP:OD1	1:C:1115:ASP:N	2.53	0.41
1:C:2056:VAL:O	1:C:2060:LEU:HG	2.21	0.41
1:F:10:LYS:HD2	1:F:10:LYS:HA	1.83	0.41
1:F:293:LEU:HD23	1:F:570:LEU:HD11	2.02	0.41
1:A:329:PRO:HB3	1:A:381:GLU:HB3	2.03	0.41
1:A:363:GLN:HA	1:A:366:ARG:HH12	1.86	0.41
1:A:676:LYS:HG3	1:A:677:ALA:H	1.85	0.41
1:A:958:LYS:HA	1:A:958:LYS:HD3	1.91	0.41
1:A:1501:ASN:ND2	1:A:1527:PHE:O	2.52	0.41
1:E:682:LYS:HB3	1:E:682:LYS:HE3	1.84	0.41
1:E:1404:LEU:O	1:E:1408:MET:HG3	2.21	0.41
1:E:1468:LEU:HD23	1:E:1468:LEU:HA	1.88	0.41
1:D:640:PHE:CG	1:D:641:PRO:HD3	2.56	0.41
1:D:1036:HIS:HA	1:D:1039:GLN:HG2	2.03	0.41
1:D:2091:VAL:O	1:D:2091:VAL:HG12	2.20	0.41
1:D:2113:VAL:CG2	1:C:2146:SER:OG	2.69	0.41
1:B:1629:LEU:HD11	1:B:1672:VAL:HG13	2.03	0.41
1:B:1639:CYS:HB3	1:B:1644:ALA:HB3	2.03	0.41
1:C:1308:LEU:HD23	1:C:1308:LEU:HA	1.92	0.41
1:F:1581:THR:O	1:F:1585:ILE:HG12	2.20	0.41
1:A:125:LYS:HD3	1:A:125:LYS:HA	1.93	0.41
1:A:267:VAL:HG12	1:A:640:PHE:CE1	2.55	0.41
1:A:1283:MET:HG3	1:A:1287:ASN:ND2	2.36	0.41
1:E:361:GLN:OE1	1:E:366:ARG:HD3	2.21	0.41
1:E:1027:ILE:HA	1:E:1027:ILE:HD12	1.81	0.41
1:E:2056:VAL:O	1:E:2060:LEU:HG	2.21	0.41
1:D:1703:ARG:HA	1:D:1736:GLY:HA3	2.02	0.41
1:D:1835:THR:HB	1:D:1844:ILE:HG13	2.01	0.41
1:B:106:ILE:HB	1:B:154:ILE:HD12	2.03	0.41
1:B:498:TRP:CD1	1:B:498:TRP:N	2.87	0.41
1:B:876:LYS:NZ	1:B:1016:ASP:OD1	2.47	0.41
1:C:244:VAL:HG13	1:C:1083:LEU:HD23	2.01	0.41
1:C:1274:MET:HE2	1:C:1274:MET:HB3	1.95	0.41
1:C:1631:LEU:HD21	1:C:1867:ARG:H	1.86	0.41
1:C:1900:PHE:HD1	1:C:2038:LEU:HD22	1.86	0.41
1:F:1846:GLN:HB2	1:F:1851:SER:HB2	2.02	0.41
1:F:2091:VAL:O	1:F:2091:VAL:HG12	2.20	0.41
1:F:2103:GLU:HA	1:F:2103:GLU:OE1	2.20	0.41
1:A:56:ALA:HB1	1:A:92:PHE:O	2.21	0.41
1:A:106:ILE:HB	1:A:154:ILE:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:911:TYR:CD2	1:E:1005:VAL:HG21	2.56	0.41
1:E:1104:TYR:HD1	1:E:1142:MET:HE2	1.85	0.41
1:E:1795:PHE:HB3	1:E:1812:VAL:HG22	2.01	0.41
1:D:189:ALA:HB1	1:C:2112:MET:HA	2.03	0.41
1:D:257:PHE:CE2	1:D:259:PHE:HB2	2.56	0.41
1:D:543:LEU:HD23	1:D:543:LEU:HA	1.93	0.41
1:D:1283:MET:HG3	1:D:1287:ASN:ND2	2.36	0.41
1:D:2056:VAL:O	1:D:2059:ILE:HG22	2.20	0.41
1:B:1:MET:HA	1:B:1690:LYS:NZ	2.35	0.41
1:B:244:VAL:O	1:B:248:LYS:HG3	2.21	0.41
1:B:308:LEU:O	1:B:312:ILE:HG12	2.21	0.41
1:B:674:ASN:HD22	1:E:411:ILE:HD12	1.83	0.41
1:B:1472:HIS:NE2	1:B:1602:LYS:HD3	2.36	0.41
1:B:2141:LEU:HD23	1:B:2141:LEU:HA	1.89	0.41
1:C:451:LEU:HA	1:C:1593:MET:CE	2.51	0.41
1:C:728:GLU:CG	1:C:730:GLY:H	2.34	0.41
1:C:843:LEU:HB3	1:C:880:ARG:HD2	2.02	0.41
1:C:911:TYR:CD2	1:C:1005:VAL:HG21	2.56	0.41
1:C:968:TYR:CD1	1:C:1103:ILE:HG12	2.56	0.41
1:C:982:SER:HB3	1:C:1056:TRP:HE3	1.85	0.41
1:C:1312:LYS:HA	1:C:1312:LYS:HD3	1.96	0.41
1:C:1557:LYS:HG3	1:C:1558:ARG:N	2.36	0.41
1:F:161:VAL:HG11	1:F:168:ILE:HD12	2.03	0.41
1:F:188:GLN:OE1	1:E:2108:GLU:HG3	2.20	0.41
1:F:581:THR:HG23	1:F:604:VAL:HG23	2.03	0.41
1:F:640:PHE:CG	1:F:641:PRO:HD3	2.56	0.41
1:F:707:ARG:H	1:F:707:ARG:HD3	1.86	0.41
1:F:1177:GLU:HG3	1:F:1485:LYS:HD2	2.02	0.41
1:F:1637:ARG:HH22	1:F:1863:ILE:HG12	1.86	0.41
1:F:2124:ILE:HD12	1:E:204:ARG:HH21	1.68	0.41
1:F:2150:PHE:HD2	1:E:2113:VAL:HG23	1.85	0.41
1:A:42:MET:HG2	1:A:180:VAL:HG21	2.01	0.41
1:A:636:LEU:HD11	1:A:679:PHE:CZ	2.56	0.41
1:A:960:ILE:HD13	1:A:1115:ASP:HB2	2.03	0.41
1:E:498:TRP:CE3	1:E:514:PRO:HD3	2.55	0.41
1:E:1002:LYS:O	1:E:1006:ILE:HG13	2.21	0.41
1:E:1087:LEU:HD23	1:E:1087:LEU:HA	1.92	0.41
1:E:1370:TYR:OH	1:E:1557:LYS:O	2.34	0.41
1:E:1900:PHE:HD1	1:E:2038:LEU:HD22	1.86	0.41
1:D:317:ALA:HB1	1:D:509:ILE:HG12	2.03	0.41
1:D:578:LEU:HD23	1:D:1231:LEU:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1009:LEU:HA	1:D:1012:VAL:HG22	2.03	0.41
1:B:82:HIS:CE1	1:B:86:LYS:HB3	2.56	0.41
1:B:636:LEU:HD12	1:B:636:LEU:H	1.86	0.41
1:B:764:VAL:HG23	1:B:784:LEU:HD23	2.03	0.41
1:B:770:MET:HE1	1:B:774:ARG:NE	2.35	0.41
1:C:199:ILE:HG23	1:C:204:ARG:NH1	2.36	0.41
1:C:498:TRP:CD1	1:C:498:TRP:N	2.89	0.41
1:C:1690:LYS:HD3	1:C:1690:LYS:HA	1.85	0.41
1:F:584:TRP:CE3	1:F:604:VAL:HG21	2.55	0.41
1:F:1918:ASN:C	1:F:1920:ALA:H	2.24	0.41
1:F:2052:VAL:CG2	1:E:205:ALA:HB2	2.43	0.41
1:F:2150:PHE:HZ	1:E:2120:PRO:HA	1.80	0.41
1:A:470:THR:HG22	1:A:472:ALA:N	2.30	0.41
1:A:636:LEU:H	1:A:636:LEU:HD12	1.86	0.41
1:A:797:LEU:HD22	1:A:1071:ALA:HB2	2.02	0.41
1:A:1036:HIS:O	1:A:1039:GLN:HG2	2.21	0.41
1:A:1467:PHE:O	1:A:1471:ILE:HG12	2.21	0.41
1:A:1472:HIS:NE2	1:A:1602:LYS:HD3	2.36	0.41
1:E:374:THR:O	1:E:377:MET:HE2	2.20	0.41
1:E:1300:ARG:HD2	1:E:1300:ARG:HA	1.84	0.41
1:D:461:LYS:HE2	1:D:461:LYS:HB2	1.86	0.40
1:D:717:ILE:HD13	1:D:717:ILE:HA	1.90	0.40
1:D:1177:GLU:HG3	1:D:1485:LYS:HD2	2.02	0.40
1:D:1490:PHE:HB2	1:D:1585:ILE:HG13	2.02	0.40
1:D:1514:THR:HG1	1:D:1517:GLU:CG	2.33	0.40
1:B:1645:PRO:HB2	1:B:1648:ASP:HB2	2.03	0.40
1:B:2101:GLN:O	1:B:2105:LEU:HD23	2.21	0.40
1:C:755:LYS:NZ	1:C:783:GLN:OE1	2.39	0.40
1:C:1468:LEU:HD23	1:C:1468:LEU:HA	1.88	0.40
1:F:317:ALA:HB1	1:F:509:ILE:HG12	2.03	0.40
1:F:1300:ARG:HH12	1:E:1546:LEU:HA	1.86	0.40
1:F:1490:PHE:HB2	1:F:1585:ILE:HG13	2.02	0.40
1:A:38:ILE:O	1:A:42:MET:HG3	2.21	0.40
1:A:248:LYS:O	1:A:1130:HIS:HB3	2.21	0.40
1:A:453:LYS:HB2	1:A:453:LYS:HE2	1.70	0.40
1:A:588:TYR:CE2	1:A:708:ILE:HD12	2.55	0.40
1:A:798:ASN:OD1	1:A:993:HIS:HB3	2.20	0.40
1:A:1139:TRP:HA	1:A:1142:MET:CG	2.50	0.40
1:E:728:GLU:CG	1:E:730:GLY:H	2.34	0.40
1:E:796:GLU:HG3	1:E:1075:LEU:HA	2.02	0.40
1:D:1457:THR:HG22	1:D:1565:LYS:HZ1	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2100:ASP:OD1	1:D:2101:GLN:N	2.54	0.40
1:D:2126:ASP:OD1	1:D:2129:PHE:HB2	2.21	0.40
1:B:951:PHE:CE1	1:B:961:ARG:HG2	2.56	0.40
1:C:340:ARG:HH21	1:C:364:ASN:HB3	1.85	0.40
1:C:502:SER:OG	1:C:506:GLY:HA2	2.22	0.40
1:C:1106:TYR:HB2	1:C:1138:MET:CG	2.52	0.40
1:C:1913:TYR:O	1:C:1917:MET:HG2	2.20	0.40
1:F:189:ALA:HB1	1:E:2112:MET:HA	2.03	0.40
1:F:275:GLU:OE1	1:F:661:TYR:OH	2.32	0.40
1:F:1201:TYR:OH	1:F:1267:GLY:O	2.29	0.40
1:A:903:CYS:O	1:A:907:ILE:HG13	2.21	0.40
1:A:1638:TRP:CD2	1:A:1901:MET:HG2	2.56	0.40
1:E:199:ILE:HG23	1:E:204:ARG:NH1	2.36	0.40
1:E:1415:LYS:HD2	1:E:1424:VAL:HA	2.02	0.40
1:E:1557:LYS:HG3	1:E:1558:ARG:N	2.36	0.40
1:D:26:ASP:OD2	1:D:27:TYR:N	2.53	0.40
1:D:581:THR:HG23	1:D:604:VAL:HG23	2.03	0.40
1:D:809:ALA:HB2	1:D:995:GLY:HA3	2.04	0.40
1:D:1456:CYS:HB2	1:D:1613:ILE:HD13	2.02	0.40
1:D:2150:PHE:HD2	1:C:2113:VAL:HG23	1.85	0.40
1:B:56:ALA:HB1	1:B:92:PHE:O	2.21	0.40
1:B:145:LYS:HB2	1:B:145:LYS:HE3	1.77	0.40
1:B:1036:HIS:O	1:B:1039:GLN:HG2	2.21	0.40
1:B:1529:ASP:OD1	1:B:1530:SER:N	2.55	0.40
1:B:1565:LYS:HE2	1:B:1565:LYS:HB2	1.86	0.40
1:C:607:ASN:HB3	1:C:705:MET:HE2	2.03	0.40
1:C:2079:LEU:HD22	1:C:2141:LEU:HD22	2.03	0.40
1:C:2147:ILE:O	1:C:2151:TYR:N	2.52	0.40
1:F:148:ILE:HD12	1:F:149:PRO:HD2	2.04	0.40
1:F:809:ALA:HB2	1:F:995:GLY:HA3	2.04	0.40
1:F:1036:HIS:HA	1:F:1039:GLN:HG2	2.03	0.40
1:F:1283:MET:HG3	1:F:1287:ASN:ND2	2.36	0.40
1:F:1838:ASP:OD2	1:F:1842:ARG:NE	2.54	0.40
1:A:1033:LEU:HG	1:A:1035:PRO:HD2	2.03	0.40
1:A:1684:LEU:HD21	1:A:1841:LEU:HA	2.02	0.40
1:E:115:ALA:HA	1:E:162:ARG:HG3	2.03	0.40
1:E:355:PRO:HB2	1:E:357:ILE:HG22	2.03	0.40
1:E:502:SER:OG	1:E:506:GLY:HA2	2.22	0.40
1:E:961:ARG:HB2	1:E:1110:VAL:HG11	2.03	0.40
1:E:968:TYR:CD1	1:E:1103:ILE:HG12	2.56	0.40
1:E:982:SER:HB3	1:E:1056:TRP:CE3	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:196:GLU:HB3	1:C:2057:ASN:CG	2.41	0.40
1:B:1438:GLU:CG	1:B:2132:ARG:HH21	2.34	0.40
1:C:89:LYS:HG3	1:C:93:LYS:HE3	2.03	0.40
1:C:383:LYS:HE3	1:C:383:LYS:HB2	1.92	0.40
1:C:411:ILE:HD12	1:A:674:ASN:HD22	1.83	0.40
1:C:1002:LYS:O	1:C:1006:ILE:HG13	2.21	0.40
1:F:684:LYS:HE2	1:F:684:LYS:HB2	1.92	0.40
1:F:1564:TYR:C	1:F:1565:LYS:HD3	2.41	0.40
1:F:1703:ARG:HA	1:F:1736:GLY:HA3	2.02	0.40
1:A:52:ASP:O	1:A:1669:ARG:NH2	2.44	0.40
1:A:82:HIS:CE1	1:A:86:LYS:HB3	2.56	0.40
1:A:1084:PHE:CZ	1:A:1134:VAL:HG21	2.57	0.40
1:A:1639:CYS:HB3	1:A:1644:ALA:HB3	2.03	0.40
1:E:640:PHE:CD1	1:E:641:PRO:HD3	2.56	0.40
1:E:948:GLY:O	1:E:964:ARG:HD2	2.21	0.40
1:E:1877:VAL:N	1:E:1889:ASN:OD1	2.39	0.40
1:D:49:ASP:HB2	1:D:51:LYS:HZ2	1.86	0.40
1:B:679:PHE:CZ	1:B:1166:PRO:HD2	2.50	0.40
1:B:960:ILE:HD13	1:B:1115:ASP:HB2	2.03	0.40
1:B:1550:ILE:HD13	1:B:1550:ILE:HA	1.87	0.40
1:B:1638:TRP:CD2	1:B:1901:MET:HG2	2.56	0.40
1:B:1655:PHE:CE2	1:B:1656:GLU:HG3	2.57	0.40
1:B:1930:ASN:HD21	1:B:1942:LEU:HD12	1.87	0.40
1:F:584:TRP:CD1	1:F:719:GLU:HG3	2.57	0.40
1:F:2100:ASP:OD1	1:F:2101:GLN:N	2.54	0.40
1:A:742:HIS:ND1	1:A:1023:LEU:HD22	2.37	0.40
1:A:1930:ASN:HD21	1:A:1942:LEU:HD12	1.87	0.40
1:A:2133:HIS:ND1	1:A:2133:HIS:N	2.69	0.40
1:E:580:ALA:HB2	1:E:726:LEU:HD21	2.03	0.40
1:E:932:ILE:HG13	1:E:932:ILE:H	1.66	0.40
1:E:1205:LEU:HD23	1:E:1205:LEU:HA	1.88	0.40
1:E:1308:LEU:HD23	1:E:1308:LEU:HA	1.92	0.40
1:E:1318:SER:HB3	1:E:1334:GLY:HA2	2.02	0.40
1:E:2147:ILE:O	1:E:2151:TYR:N	2.52	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	1853/2173 (85%)	1754 (95%)	98 (5%)	1 (0%)	51 83
1	B	1853/2173 (85%)	1754 (95%)	98 (5%)	1 (0%)	51 83
1	C	1977/2173 (91%)	1890 (96%)	87 (4%)	0	100 100
1	D	2016/2173 (93%)	1947 (97%)	69 (3%)	0	100 100
1	E	1977/2173 (91%)	1890 (96%)	87 (4%)	0	100 100
1	F	2016/2173 (93%)	1947 (97%)	69 (3%)	0	100 100
All	All	11692/13038 (90%)	11182 (96%)	508 (4%)	2 (0%)	100 100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	1366	VAL
1	A	1366	VAL

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	1668/1941 (86%)	1621 (97%)	47 (3%)	43 72
1	B	1668/1941 (86%)	1622 (97%)	46 (3%)	43 72
1	C	1781/1941 (92%)	1732 (97%)	49 (3%)	43 72
1	D	1809/1941 (93%)	1804 (100%)	5 (0%)	92 97
1	E	1781/1941 (92%)	1732 (97%)	49 (3%)	43 72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	F	1809/1941 (93%)	1804 (100%)	5 (0%)	92 97
All	All	10516/11646 (90%)	10315 (98%)	201 (2%)	59 80

All (201) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	707	ARG
1	D	1298	HIS
1	D	1483	ARG
1	D	1669	ARG
1	D	2112	MET
1	B	42	MET
1	B	134	TYR
1	B	183	TYR
1	B	210	MET
1	B	233	MET
1	B	284	MET
1	B	308	LEU
1	B	358	GLN
1	B	360	LYS
1	B	422	LYS
1	B	566	ARG
1	B	594	GLN
1	B	666	SER
1	B	679	PHE
1	B	680	TYR
1	B	747	GLU
1	B	959	PHE
1	B	980	ASP
1	B	991	MET
1	B	1064	CYS
1	B	1084	PHE
1	B	1119	PHE
1	B	1154	SER
1	B	1161	LYS
1	B	1222	PRO
1	B	1316	LYS
1	B	1376	ARG
1	B	1377	ASP
1	B	1398	MET
1	B	1427	ARG
1	B	1439	ASN

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Mol	Chain	Res	Type
1	B	1493	ARG
1	B	1501	ASN
1	B	1548	LEU
1	B	1549	ASP
1	B	1562	MET
1	B	1612	SER
1	B	1833	MET
1	B	1841	LEU
1	B	1872	ASP
1	B	1899	ASN
1	B	1913	TYR
1	B	1947	LEU
1	B	2064	TYR
1	B	2083	ASP
1	B	2122	ASP
1	C	86	LYS
1	C	183	TYR
1	C	226	TYR
1	C	253	ARG
1	C	286	ARG
1	C	418	SER
1	C	425	SER
1	C	532	ARG
1	C	707	ARG
1	C	867	LYS
1	C	903	CYS
1	C	931	LYS
1	C	957	HIS
1	C	962	MET
1	C	975	LYS
1	C	980	ASP
1	C	1019	MET
1	C	1034	ASP
1	C	1048	HIS
1	C	1112	ASP
1	C	1160	LYS
1	C	1203	ASP
1	C	1285	ASP
1	C	1297	SER
1	C	1330	PHE
1	C	1356	LYS
1	C	1376	ARG

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Mol	Chain	Res	Type
1	C	1405	ARG
1	C	1465	LYS
1	C	1467	PHE
1	C	1516	GLU
1	C	1544	ARG
1	C	1558	ARG
1	C	1564	TYR
1	C	1568	LYS
1	C	1583	GLU
1	C	1605	LYS
1	C	1669	ARG
1	C	1699	GLN
1	C	1705	TYR
1	C	1833	MET
1	C	1915	LEU
1	C	1919	ARG
1	C	1943	ASP
1	C	2064	TYR
1	C	2078	LEU
1	C	2092	ARG
1	C	2132	ARG
1	C	2145	ASP
1	F	707	ARG
1	F	1298	HIS
1	F	1483	ARG
1	F	1669	ARG
1	F	2112	MET
1	A	42	MET
1	A	134	TYR
1	A	183	TYR
1	A	210	MET
1	A	233	MET
1	A	284	MET
1	A	308	LEU
1	A	358	GLN
1	A	360	LYS
1	A	422	LYS
1	A	566	ARG
1	A	594	GLN
1	A	666	SER
1	A	679	PHE
1	A	680	TYR

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Mol	Chain	Res	Type
1	A	747	GLU
1	A	959	PHE
1	A	980	ASP
1	A	991	MET
1	A	1064	CYS
1	A	1084	PHE
1	A	1119	PHE
1	A	1154	SER
1	A	1161	LYS
1	A	1222	PRO
1	A	1316	LYS
1	A	1376	ARG
1	A	1377	ASP
1	A	1398	MET
1	A	1427	ARG
1	A	1439	ASN
1	A	1493	ARG
1	A	1501	ASN
1	A	1548	LEU
1	A	1549	ASP
1	A	1562	MET
1	A	1612	SER
1	A	1833	MET
1	A	1841	LEU
1	A	1872	ASP
1	A	1899	ASN
1	A	1913	TYR
1	A	1947	LEU
1	A	2064	TYR
1	A	2083	ASP
1	A	2122	ASP
1	A	2132	ARG
1	E	86	LYS
1	E	183	TYR
1	E	226	TYR
1	E	253	ARG
1	E	286	ARG
1	E	418	SER
1	E	425	SER
1	E	532	ARG
1	E	707	ARG
1	E	867	LYS

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Mol	Chain	Res	Type
1	E	903	CYS
1	E	931	LYS
1	E	957	HIS
1	E	962	MET
1	E	975	LYS
1	E	980	ASP
1	E	1019	MET
1	E	1034	ASP
1	E	1048	HIS
1	E	1112	ASP
1	E	1160	LYS
1	E	1203	ASP
1	E	1285	ASP
1	E	1297	SER
1	E	1330	PHE
1	E	1356	LYS
1	E	1376	ARG
1	E	1405	ARG
1	E	1465	LYS
1	E	1467	PHE
1	E	1516	GLU
1	E	1544	ARG
1	E	1558	ARG
1	E	1564	TYR
1	E	1568	LYS
1	E	1583	GLU
1	E	1605	LYS
1	E	1669	ARG
1	E	1699	GLN
1	E	1705	TYR
1	E	1833	MET
1	E	1915	LEU
1	E	1919	ARG
1	E	1943	ASP
1	E	2064	TYR
1	E	2078	LEU
1	E	2092	ARG
1	E	2132	ARG
1	E	2145	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (29) such sidechains are listed below:

Mol	Chain	Res	Type
1	D	137	GLN
1	D	1298	HIS
1	D	1615	ASN
1	B	674	ASN
1	B	1036	HIS
1	B	1255	GLN
1	B	1434	ASN
1	C	323	ASN
1	C	625	ASN
1	C	842	HIS
1	C	1036	HIS
1	C	1082	ASN
1	C	1287	ASN
1	C	1451	GLN
1	F	137	GLN
1	F	1123	GLN
1	F	1298	HIS
1	F	1615	ASN
1	A	674	ASN
1	A	1036	HIS
1	A	1255	GLN
1	A	1434	ASN
1	E	323	ASN
1	E	625	ASN
1	E	842	HIS
1	E	1036	HIS
1	E	1287	ASN
1	E	1403	GLN
1	E	1451	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

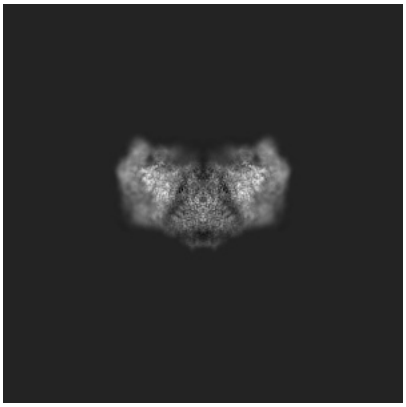
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-18408. These allow visual inspection of the internal detail of the map and identification of artifacts.

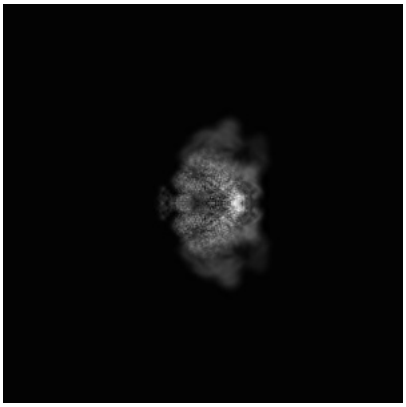
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

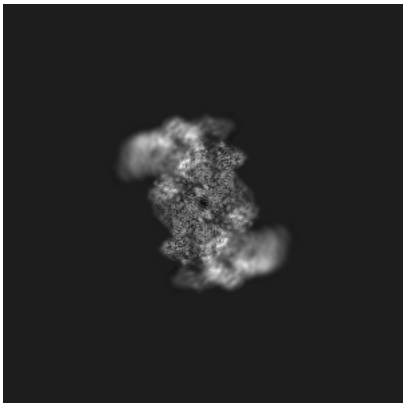
6.1.1 Primary map



X



Y



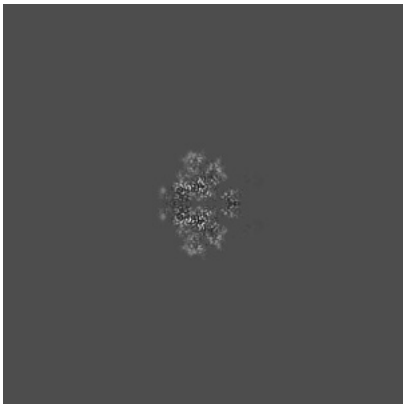
Z

The images above show the map projected in three orthogonal directions.

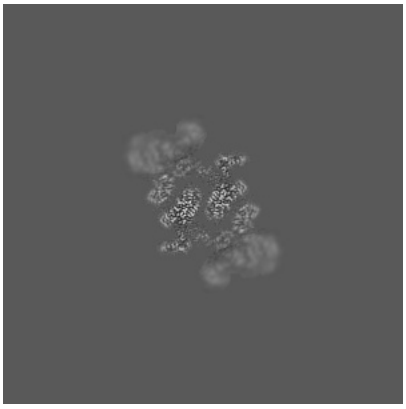
6.2 Central slices

6.2.1 Primary map

X Index: 350



Y Index: 350

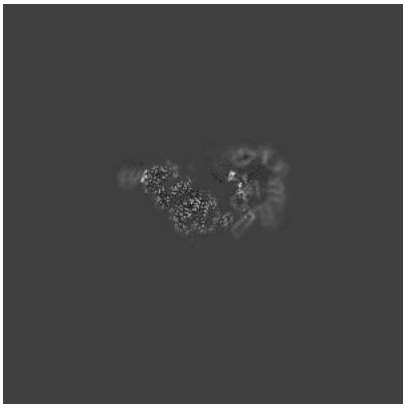


Z Index: 350

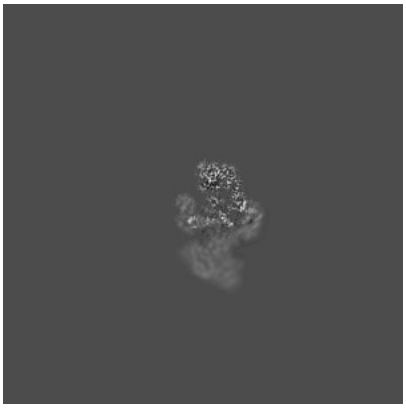
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 317



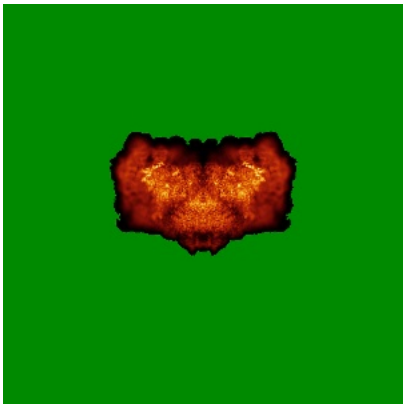
Y Index: 424

Z Index: 385

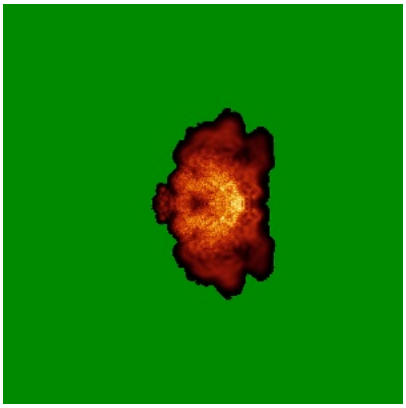
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

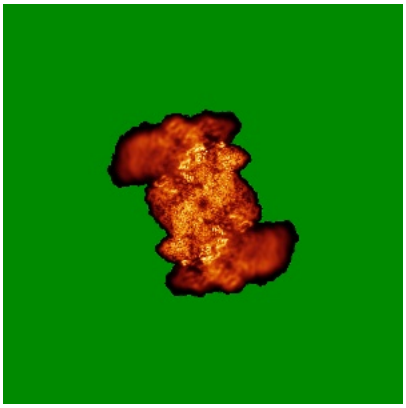
6.4.1 Primary map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.305. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

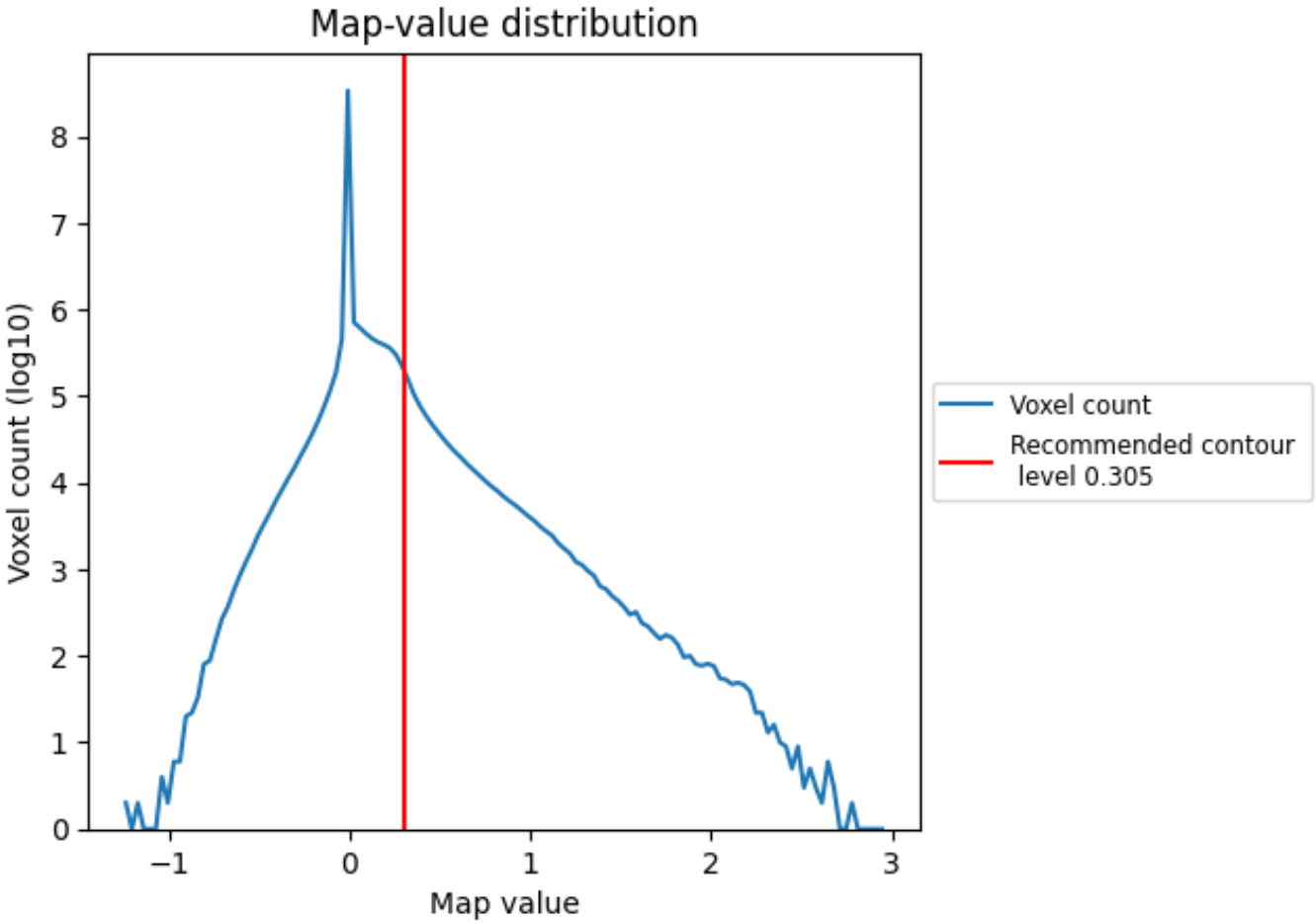
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

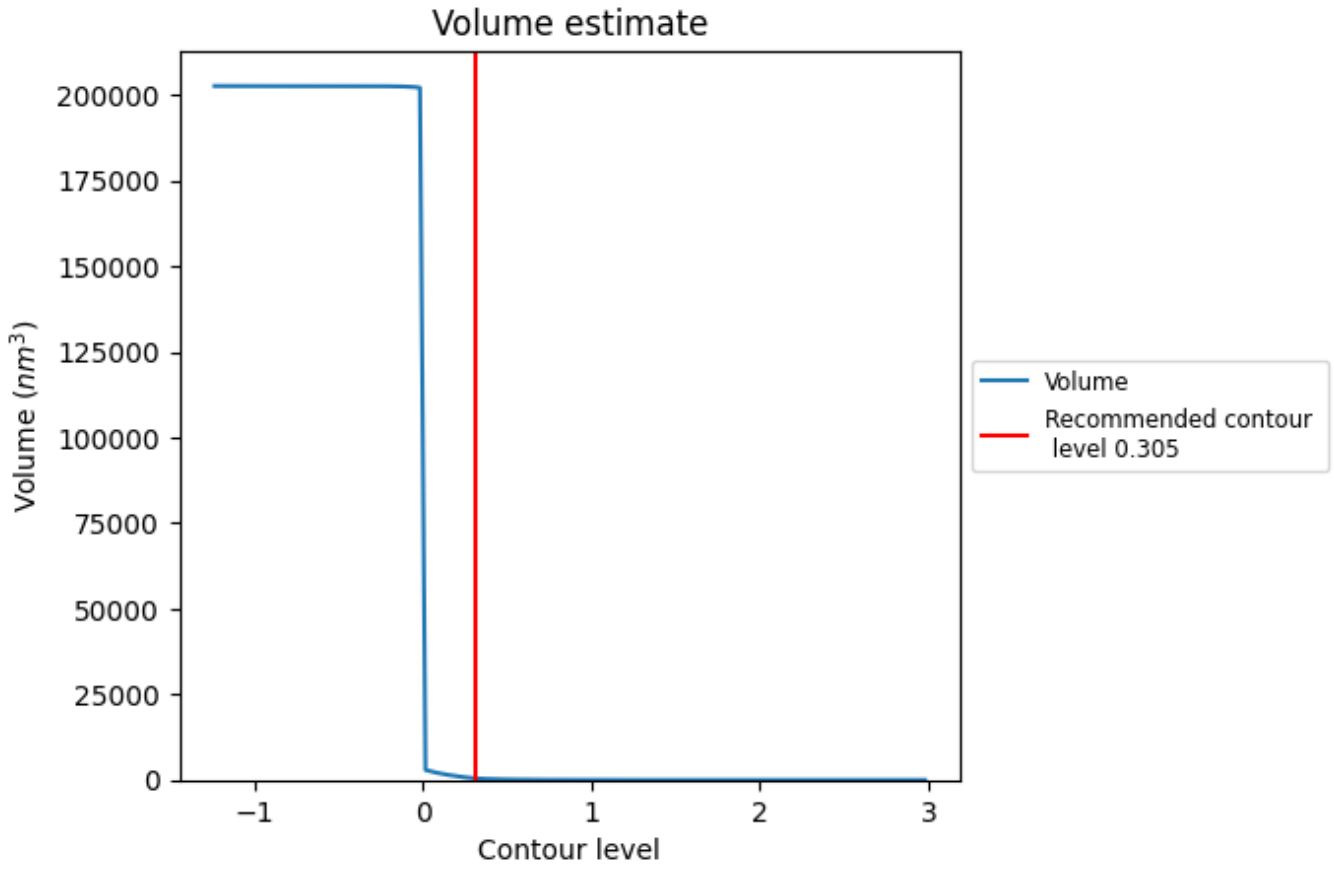
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

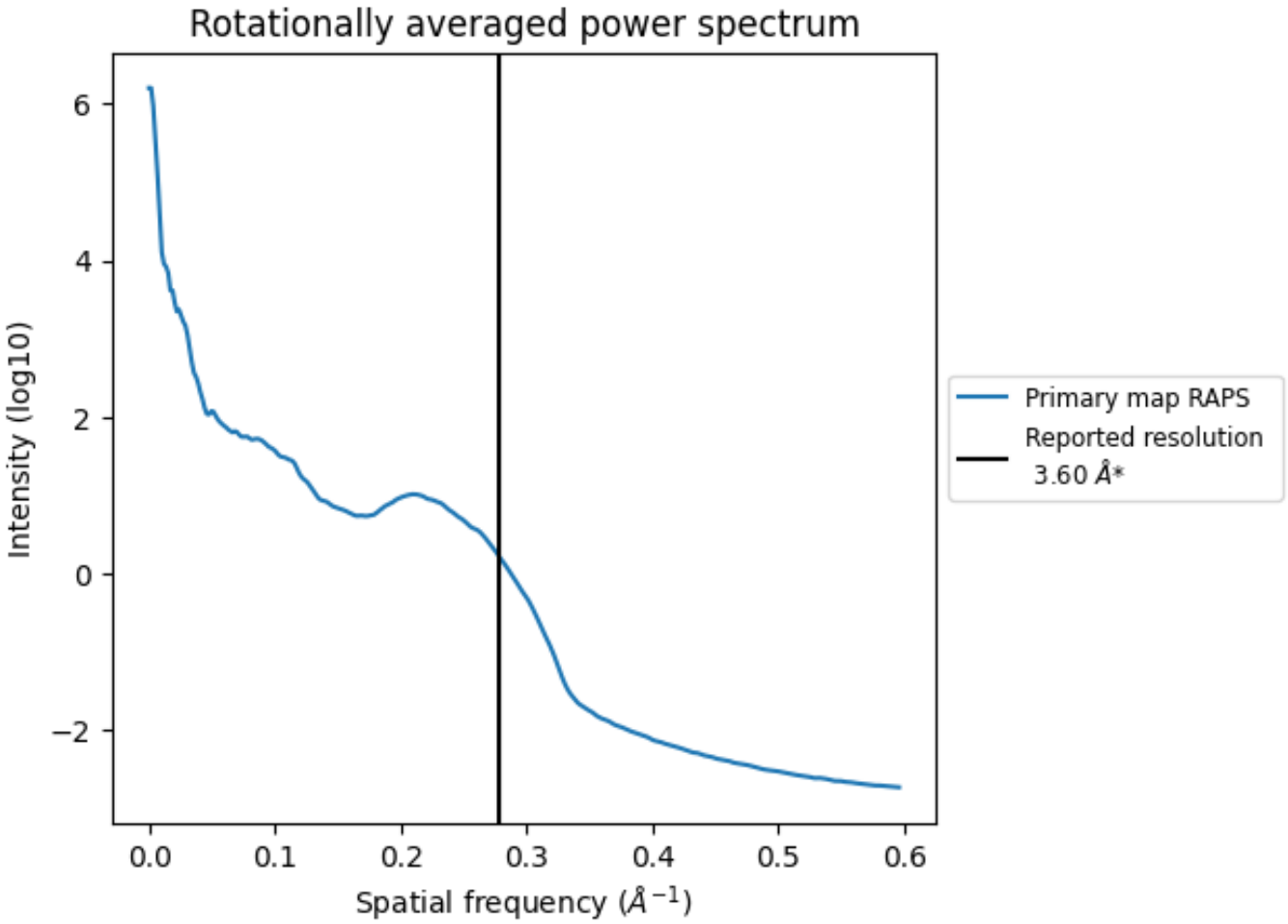
7.2 Volume estimate



The volume at the recommended contour level is 485 nm^3; this corresponds to an approximate mass of 438 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.278 Å^{-1}

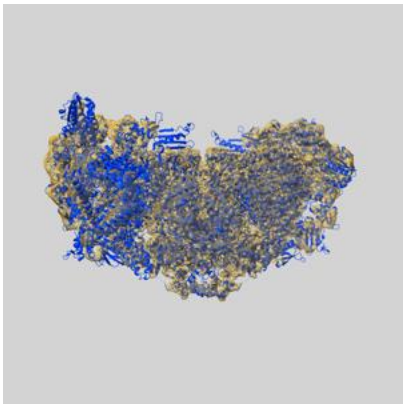
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

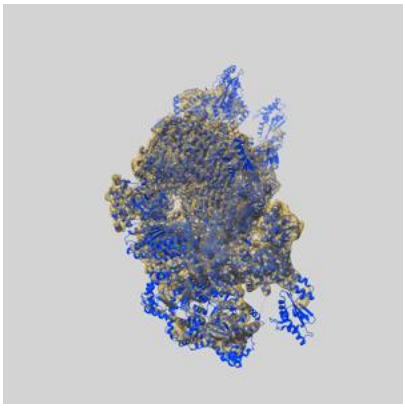
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-18408 and PDB model 8QHD. Per-residue inclusion information can be found in section 3 on page 7.

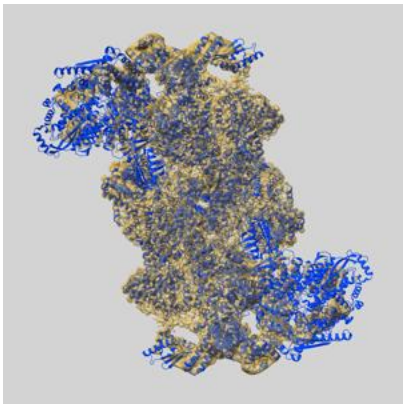
9.1 Map-model overlay



X



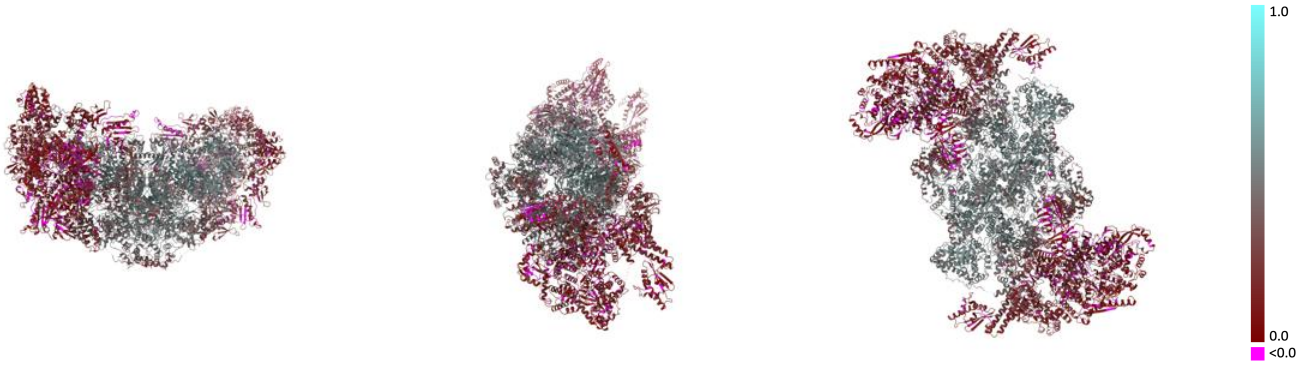
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.305 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

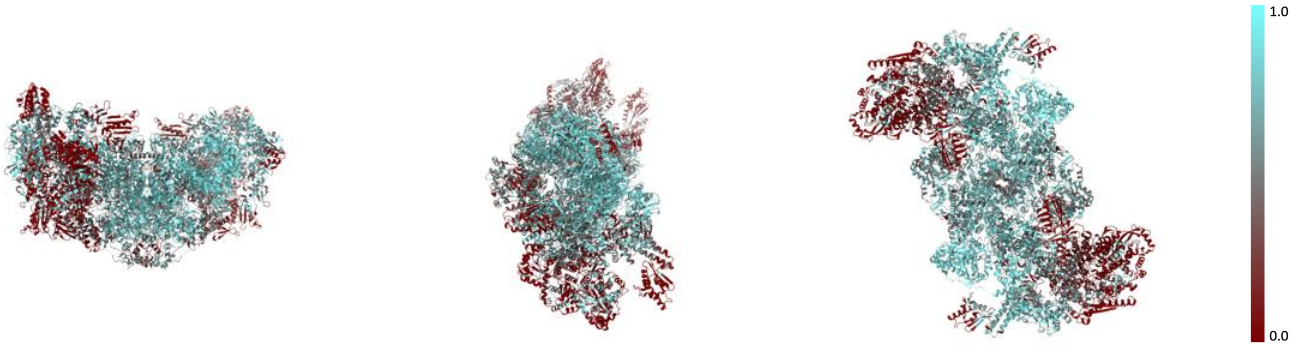
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

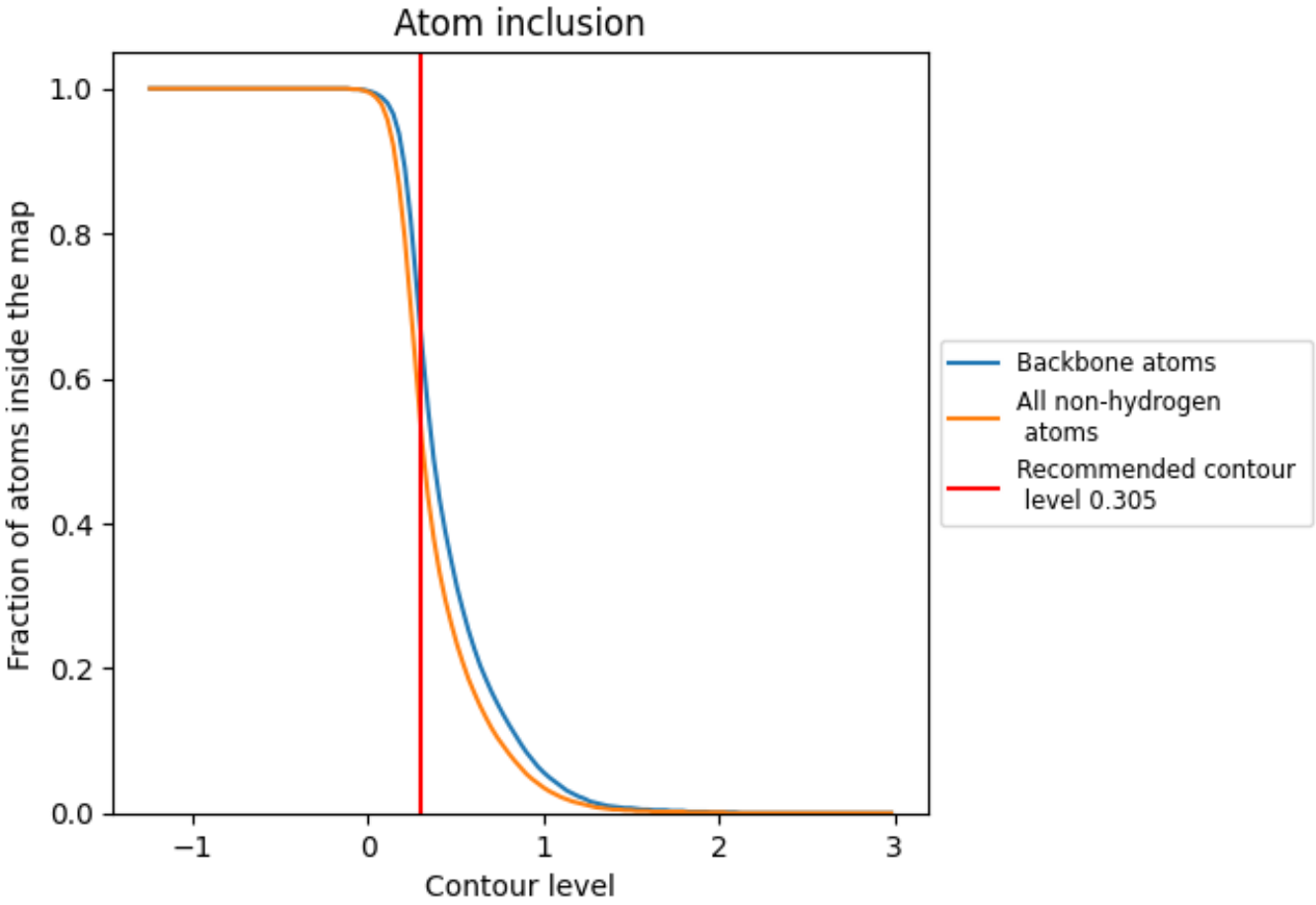
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.305).

9.4 Atom inclusion (i)



At the recommended contour level, 66% of all backbone atoms, 52% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.305) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5250	0.3180
A	0.5990	0.4250
B	0.6380	0.4430
C	0.7090	0.4060
D	0.2710	0.1310
E	0.6900	0.3960
F	0.2650	0.1300